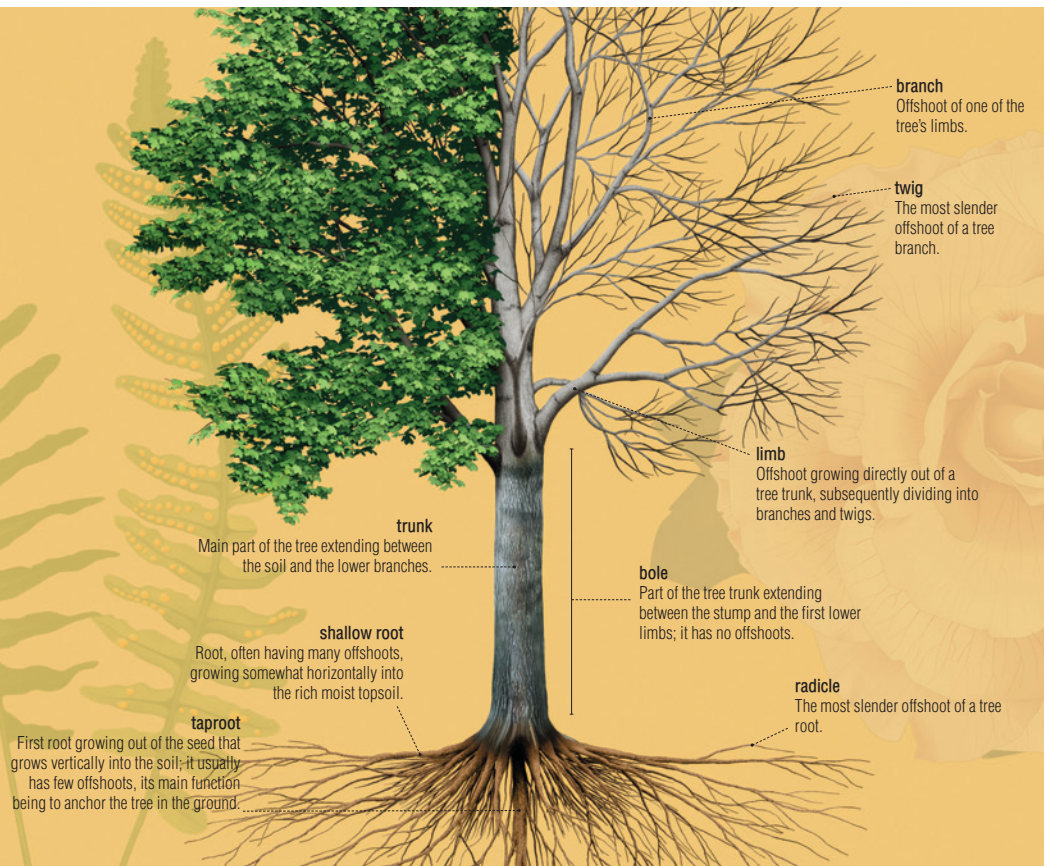


PLANTS & GARDENING



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Jean-Claude **Corbeil**

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INTRODUCTION

EDITORIAL POLICY

The Visual Dictionary takes an inventory of the physical environment of a person who is part of today's technological age and who knows and uses a large number of specialized terms in a wide variety of fields.

Designed for the general public, it responds to the needs of anyone seeking the precise, correct terms for a wide range of personal or professional reasons: finding an unknown term, checking the meaning of a word, translation, advertising, teaching material, etc.

The target user has guided the choice of contents for *The Visual Dictionary*, which aims to bring together in 12 thematic books the technical terms required to express the contemporary world, in the specialized fields that shape our daily experience.

STRUCTURE

Each tome has three sections: the preliminary pages, including the table of contents; the body of the text (i.e. the detailed treatment of the theme); the index.

Information is presented moving from the most abstract to the most concrete: sub-theme, title, subtitle, illustration, terminology.

TERMINOLOGY

Each word in *The Visual Dictionary* has been carefully selected following examination of high-quality documentation, at the required level of specialization.

There may be cases where different terms are used to name the same item. In such instances, the word most frequently used by the most highly regarded authors has been chosen.

Words are usually referred to in the singular, even if the illustration shows a number of individual examples. The word designates the concept, not the actual illustration.

DEFINITIONS

Within the hierarchical format of *The Visual Dictionary*'s presentation, the definitions fit together like a Russian doll. For example, the information within the definition for the term *insect* at the top of the page does not have to be repeated for each of the insects illustrated. Instead, the text concentrates on defining the distinguishing characteristics of each insect (the *louse* is a parasite, the female *yellow jacket* stings, and so forth).

Since the definition leaves out what is obvious from the illustration, the illustrations and definitions complement one another.

The vast majority of the terms in the *Visual Dictionary* are defined. Terms are not defined when the illustration makes the meaning absolutely clear, or when the illustration suggests the usual meaning of the word (for example, the numerous *handles*).

METHODS OF CONSULTATION

Users may gain access to the contents of *The Visual Dictionary* in a variety of ways:

- From the TABLE OF CONTENTS at the end of the preliminary pages, the user can locate by title the section that is of interest.
- With the INDEX, the user can consult *The Visual Dictionary* from a word, so as to see what it corresponds to, or to verify accuracy by examining the illustration that depicts it.
- The most original aspect of *The Visual Dictionary* is the fact that the illustrations enable the user to find a word even if he or she only has a vague idea of what it is. The dictionary is unique in this feature, as consultation of any other dictionary requires the user first to know the word.

TITLE

Its definition is found below. If the title refers to information that continues over several pages, after the first page it is shown in a shaded tone with no definition.

TERM

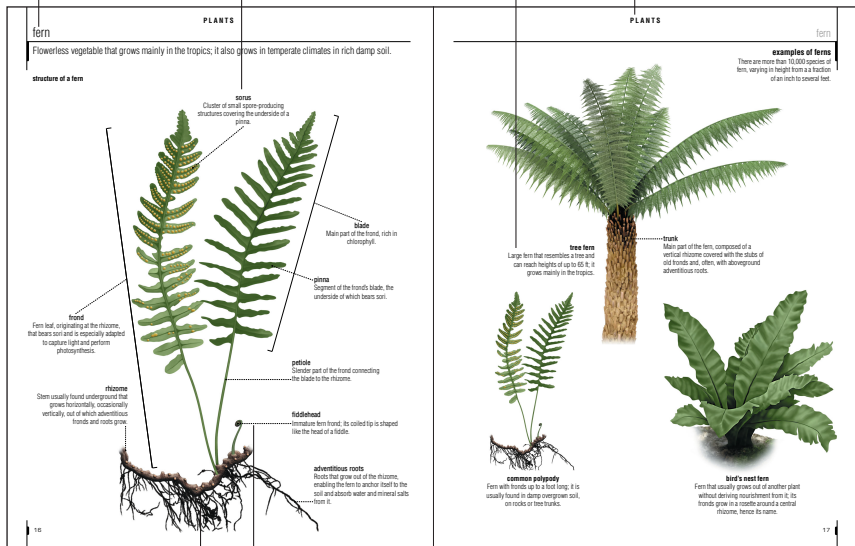
Each term appears in the index with a reference to the pages on which it appears.

DEFINITION

It explains the inherent qualities, function, or characteristics of the element depicted in the illustration.

SUB-THEME

These are shown at the end of the preliminary pages along with their definitions. They are then repeated on each page of a section, but without the definition.



ILLUSTRATION

It is an integral part of the visual definition for each of the terms that refer to it.

NARROW LINES

These link the word to the item indicated. Where too many lines would make reading difficult, they have been replaced by color codes with captions or, in rare cases, by numbers.

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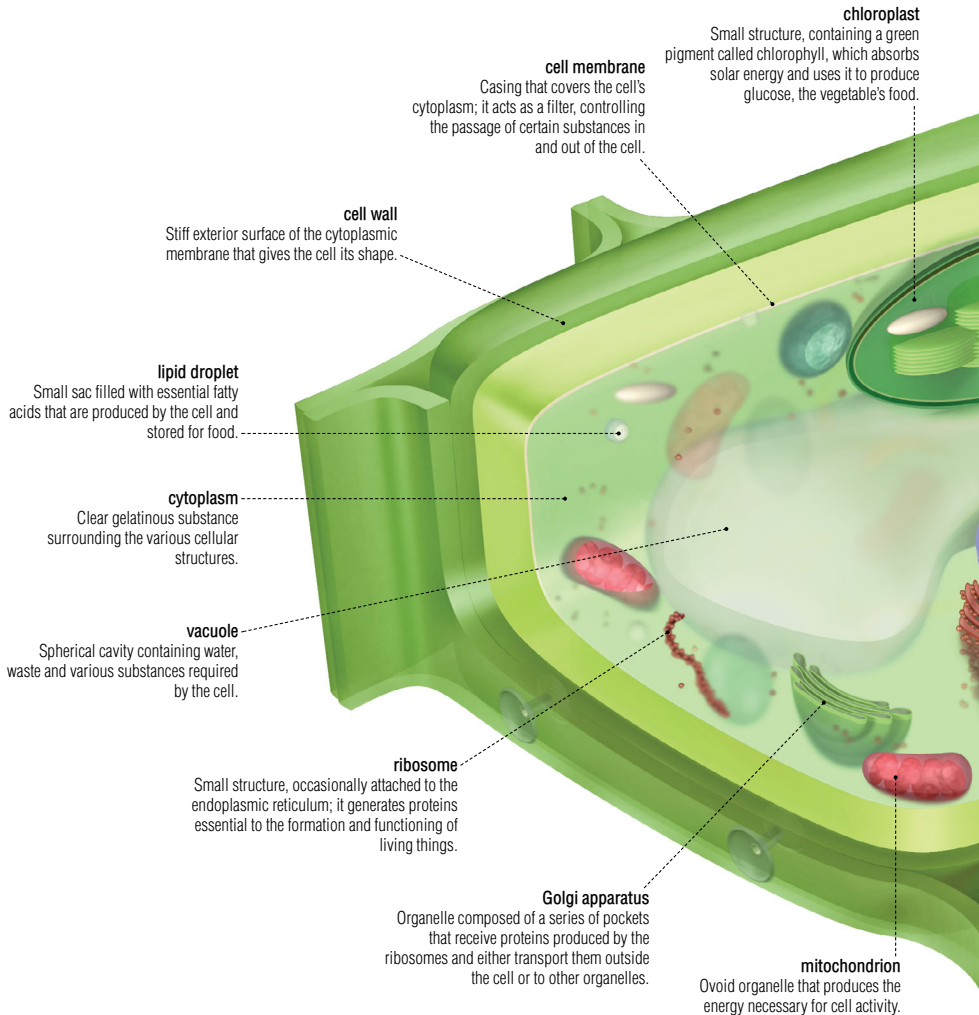
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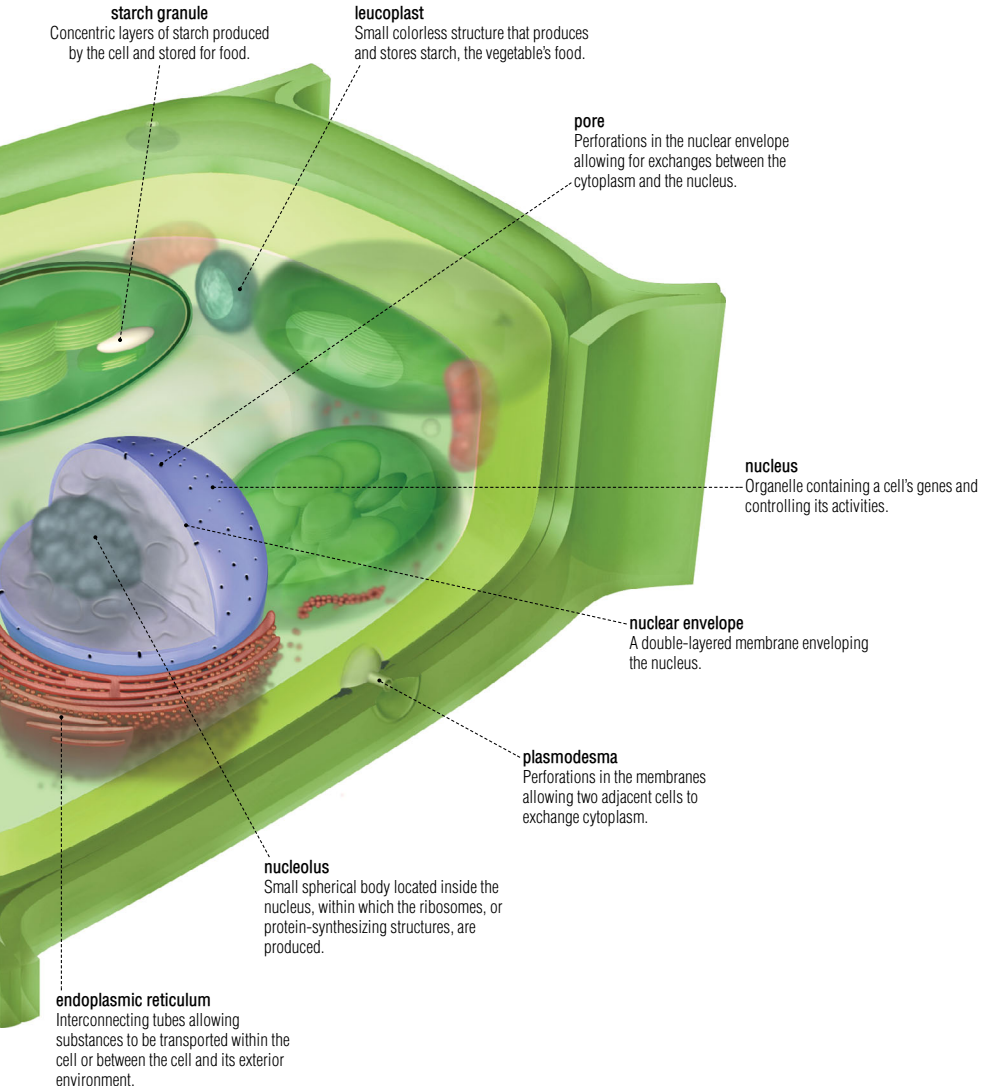
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plant cell

Smallest living structure and the constituent element of all vegetables; it varies in size and shape depending on its function.





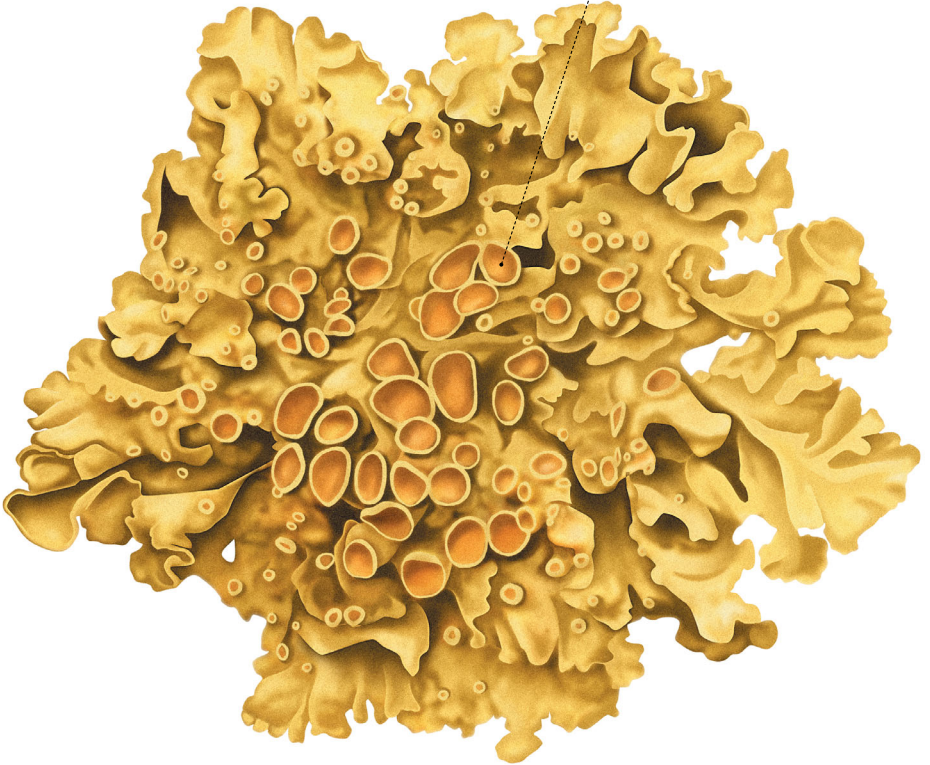
lichen

Vegetable formed from the symbiotic association of an alga and a fungus.

structure of a lichen

apothecium

Reproductive organ of the fungus that is a part of the lichen.

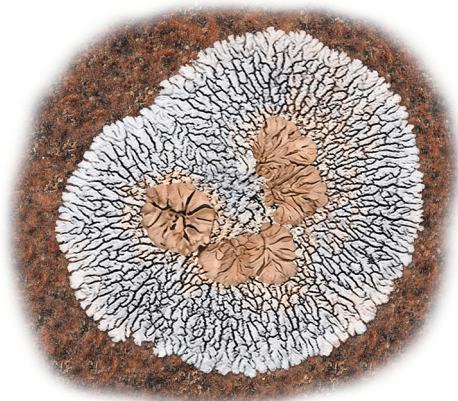


thallus

Lichen's main structure formed by the imbrication of fungal filaments and alga cells.

examples of lichens

There are more than 20,000 species of lichen, found growing out of the soil, on tree trunks or on rocks; they grow in all climatic zones.

**crustose lichen**

Lichen whose thallus forms a crust that is firmly attached to its substrate.

**fruticose lichen**

Lichen whose thallus resembles a small tree; it is attached to its substrate at a single point.

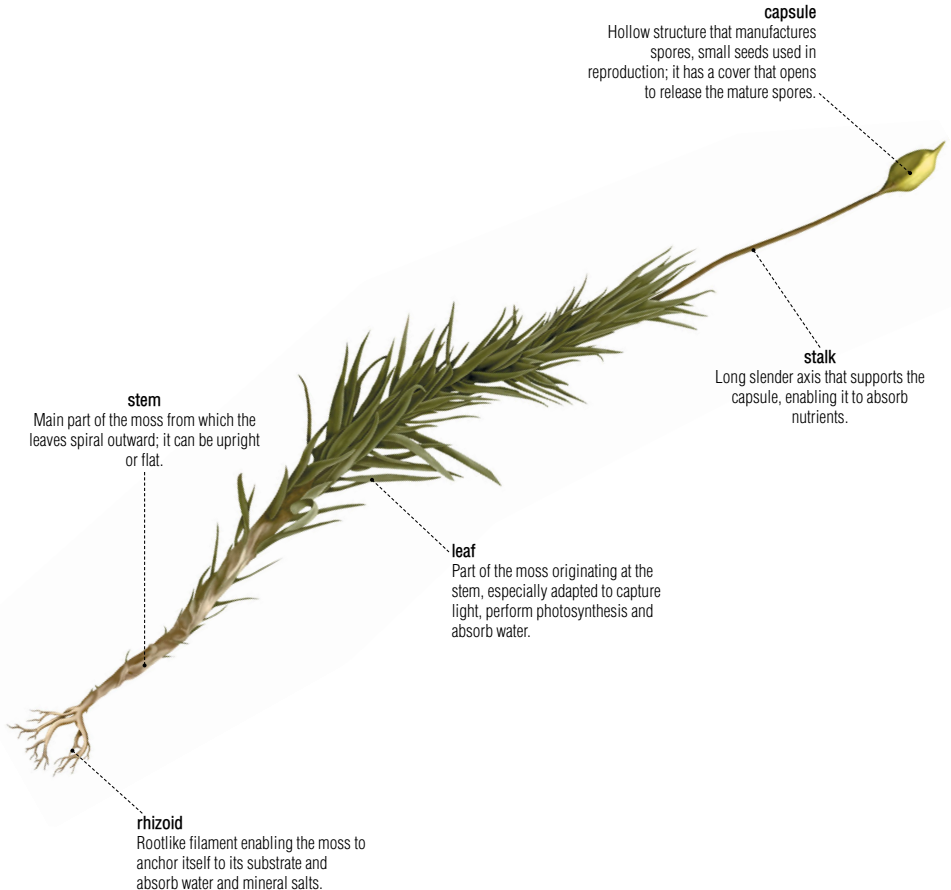
**foliose lichen**

Lichen whose thallus resembles leaves or lobes that are loosely attached to their substrate and can be easily removed.

MOSS

Flowerless vegetable, usually small in size, that grows in large tightly packed tufts to create a veritable soft carpet.

structure of a moss



examples of mosses

There are more than 13,000 species of moss; they generally grow in damp soil, on rocks or tree trunks and occasionally in fresh water.

**prickly sphagnum**

Bog moss that has no rhizoid and rarely bears a capsule; it has a high water content and its decomposition helps to form peat.

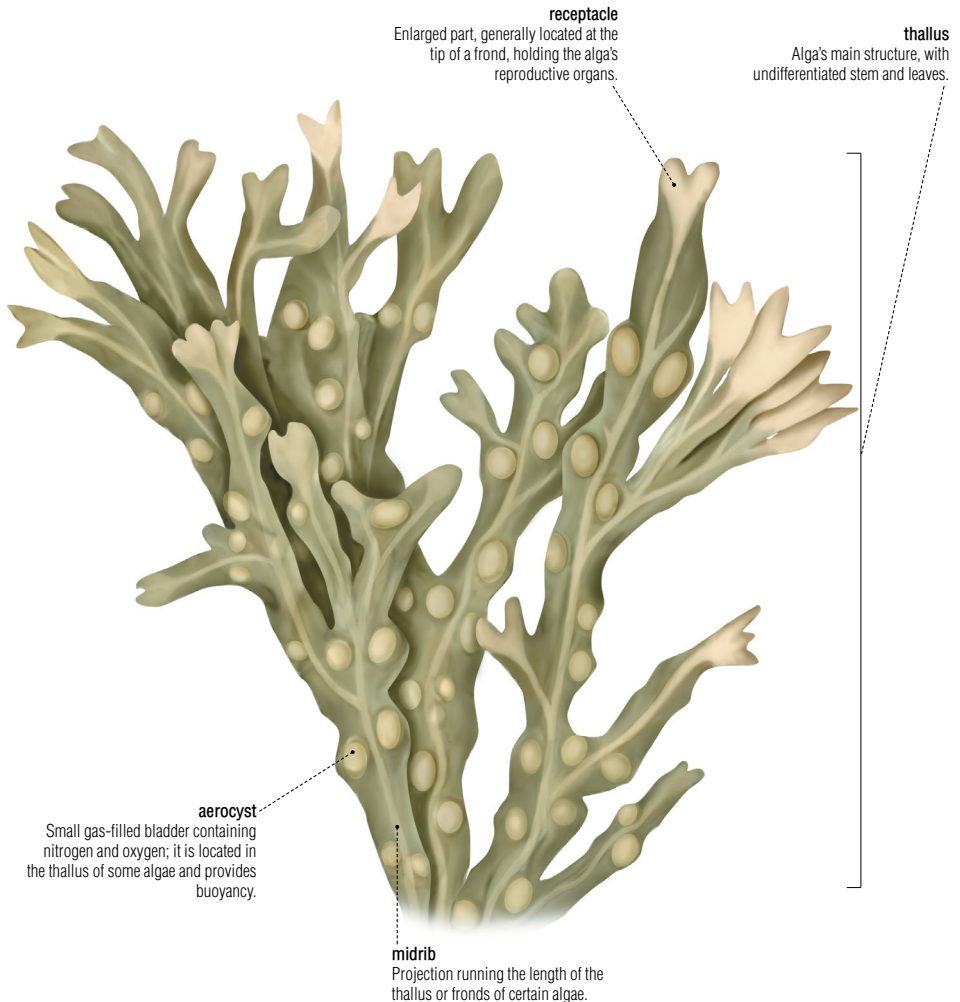
**common hair cap moss**

Ground moss with an erect stem and stiff leaves that grows in tufts, mostly in wooded areas; the capsule emerges from the end of a very long stalk.

alga

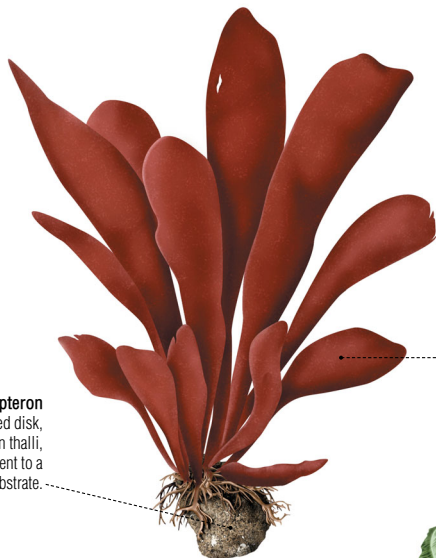
Flowerless vegetable that usually lives in aquatic environments; it produces oxygen and is at the base of the food chain.

structure of an alga



examples of algae

More than 25,000 species of algae live in aquatic environments or in some regions with damp soil; they vary in size from microscopic to 60 ft in length.

**hapteron**

Small, occasionally branched disk, located at the base of certain thalli, enabling their attachment to a substrate.

lamina

Part of the thallus that is shaped like a blade; it is quite wide and looks like a leaf.

red alga

Red-pigmented alga that generally lives in salt water and at greater depths than other algae; there are 4,000 species of red algae.

**brown alga**

Brown-pigmented alga that usually lives in the sea, often in cold water; there are more than 1,500 species of brown alga.

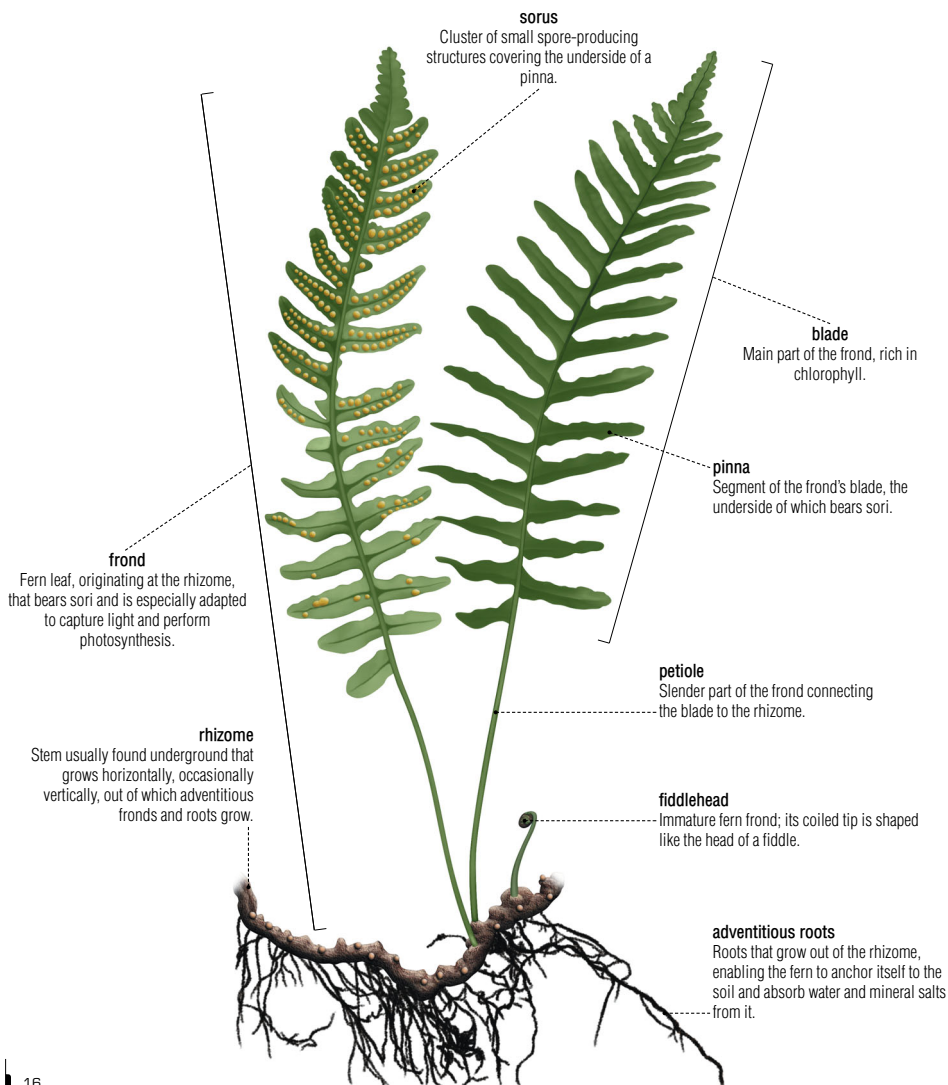
**green alga**

Alga often found in freshwater, but also in seas and some nonaquatic environments; there are 6,000 species of green algae.

fern

Flowerless vegetable that grows mainly in the tropics; it also grows in temperate climates in rich damp soil.

structure of a fern



examples of ferns

There are more than 10,000 species of fern, varying in height from a fraction of an inch to several feet.

**tree fern**

Large fern that resembles a tree and can reach heights of up to 65 ft; it grows mainly in the tropics.

trunk

Main part of the fern, composed of a vertical rhizome covered with the stubs of old fronds and, often, with aboveground adventitious roots.

**common polypody**

Fern with fronds up to a foot long; it is usually found in damp overgrown soil, on rocks or tree trunks.

**bird's nest fern**

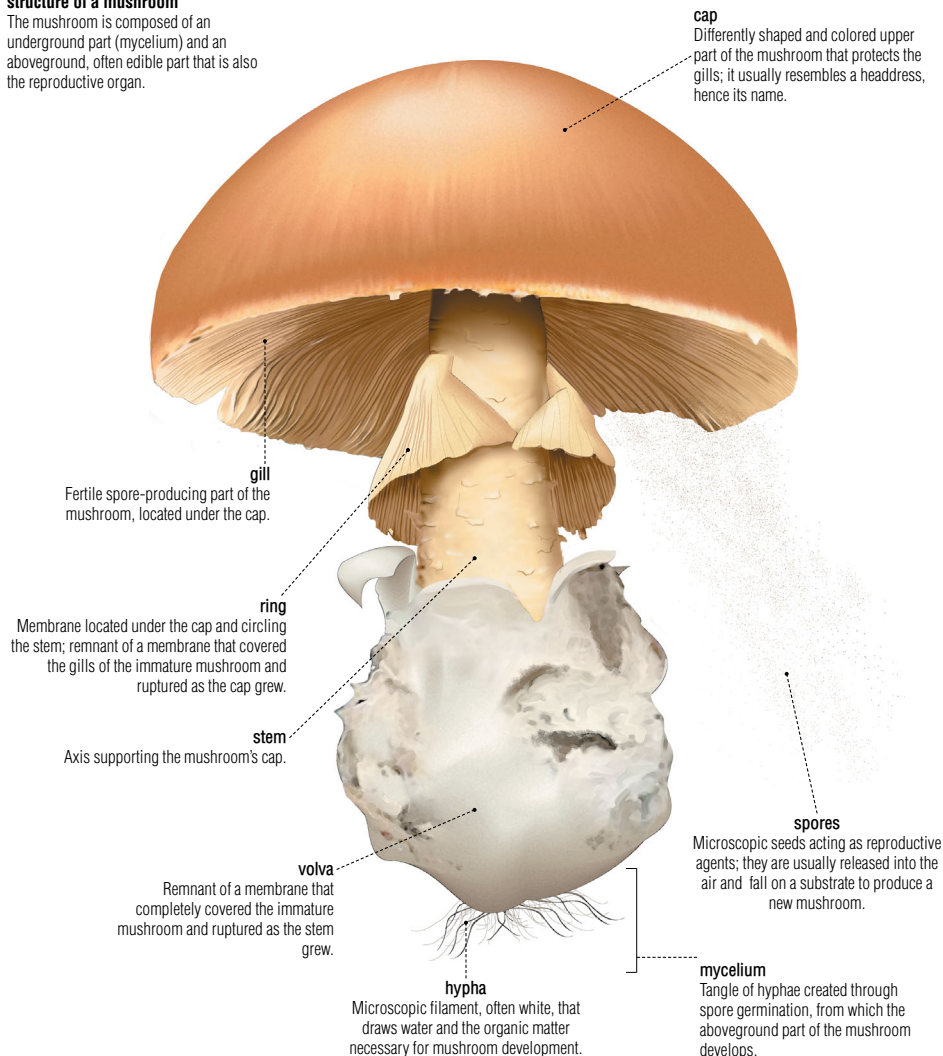
Fern that usually grows out of another plant without deriving nourishment from it; its fronds grow in a rosette around a central rhizome, hence its name.

mushroom

Organism that exists parasitically or symbiotically with other living things or grows on dead organic matter.

structure of a mushroom

The mushroom is composed of an underground part (mycelium) and an aboveground, often edible part that is also the reproductive organ.



deadly poisonous mushroom

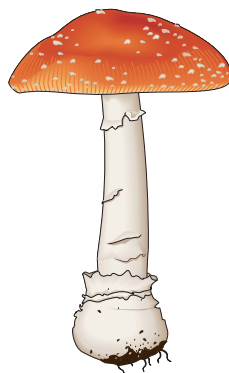
Mushroom containing a toxin that, following contact or ingestion, produces serious effects on humans, generally resulting in death.

**destroying angel**

White ground mushroom with an unpleasant smell, growing in wooded areas; the effects of its often-deadly toxin act in a delayed manner, mainly attacking the liver.

poisonous mushroom

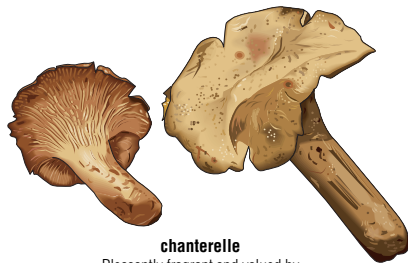
Mushroom containing a toxin that, following contact or ingestion, produces a range of usually nonfatal effects on humans.

**fly agaric**

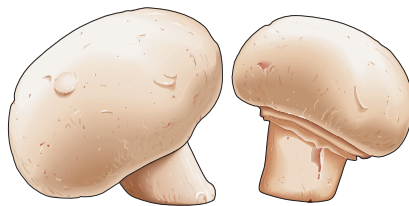
The cap of this woodland mushroom is covered with white warts; its toxin primarily attacks the nervous system, causing hallucinations, among other symptoms.

edible mushrooms

Mushrooms that can be eaten without danger by human beings.

**chanterelle**

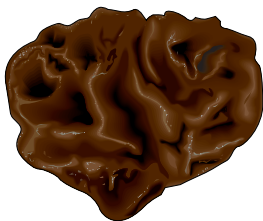
Pleasantly fragrant and valued by gourmets, especially those in Europe; it is served most often with meat or omelettes.

**cultivated mushroom**

The most widely cultivated and consumed mushroom; it is eaten raw, in salads or with dips, or cooked, primarily in sauces and on pizza.

**shiitake mushroom**

The equivalent of the cultivated mushroom in Japan, where it is widely grown for use in Oriental dishes and sauces and for its therapeutic value.

**wood ear**

Its tasteless gelatinous flesh is popular in Asia; it is usually eaten in soups or with vegetables.

**truffle**

Underground mushroom hard to find and perceived as a luxury food; it is usually associated with game and poultry.

**oyster mushroom**

Grows on trees or on dead wood; its soft white flesh is a valued ingredient in sauces, where it can substitute for the cultivated mushroom.

**morel**

The darker the specimen, the more flavorful its thin fragrant flesh; it should be thoroughly cooked to eliminate toxic substances.


delicious lactarius

Secretes an orange milk when broken open; it is used primarily in spicy sauces, especially in Spain and the south of France.


green russula

Its white brittle flesh has an aroma of hazelnut; it can be eaten raw or cooked, preferably grilled.


enoki mushroom

Long-stemmed, soft-fleshed resistant mushroom very popular in Asia; it is eaten raw, in salads, or cooked, in soups and Oriental dishes.


royal agaric

Equally flavorful raw or cooked, it has been famous since ancient times; it is not to be confused with the poisonous fly agaric, which it resembles.

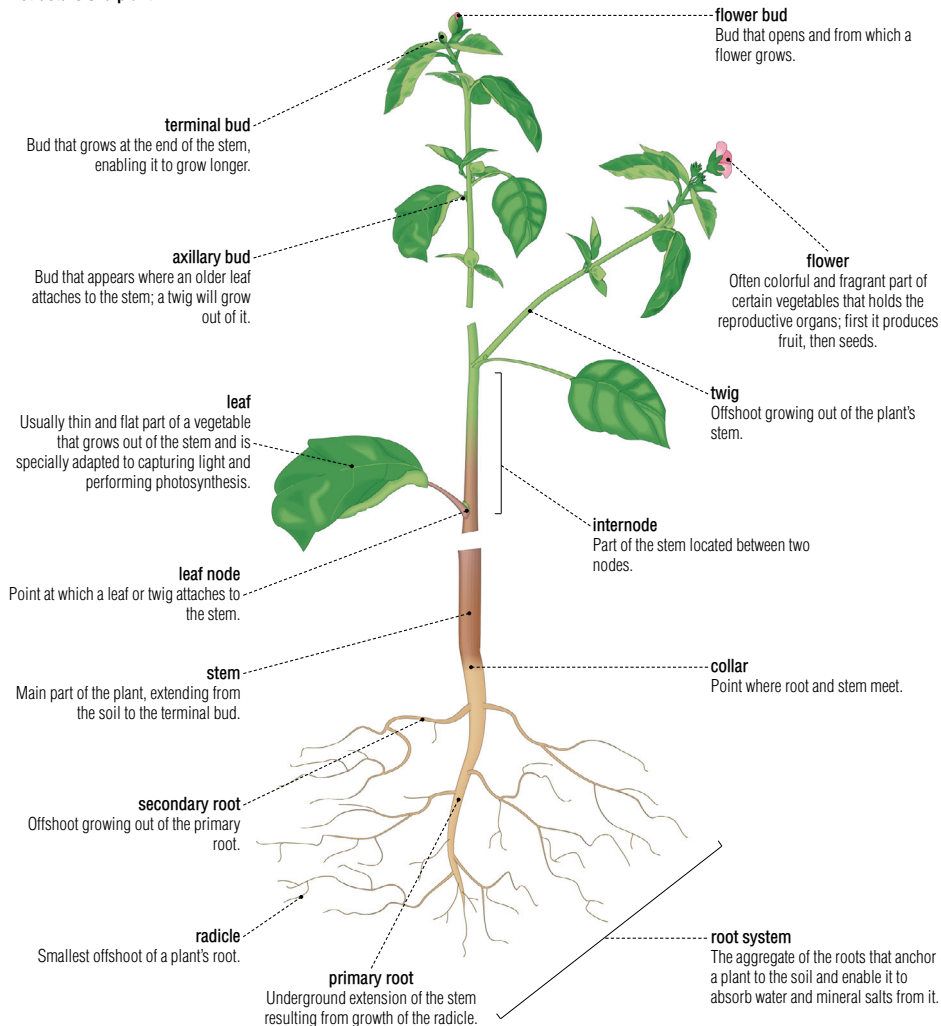

edible boletus

Squat, it can grow up to 10 in in height and diameter; it is usually cooked in oil, braised or served in an omelette.

plant

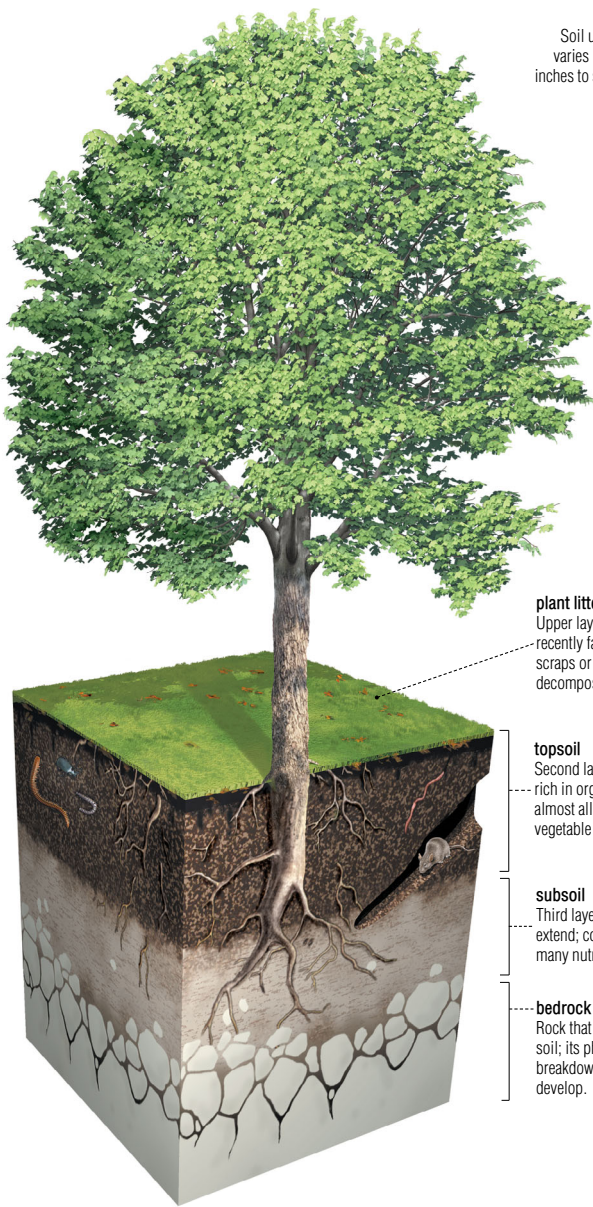
Vegetable rooted in the soil, the upper part of which grows aboveground or in freshwater; it produces oxygen and is at the bottom of the food chain.

structure of a plant



soil profile

Soil usually has four main layers; it varies in total thickness from several inches to several feet, depending on the area.

**plant litter**

Upper layer of soil, composed of recently fallen animal and vegetable scraps or those in the early stages of decomposition.

topsoil

Second layer of soil, dark in color and rich in organic matter; it contains almost all of the soil's animal and vegetable life.

subsoil

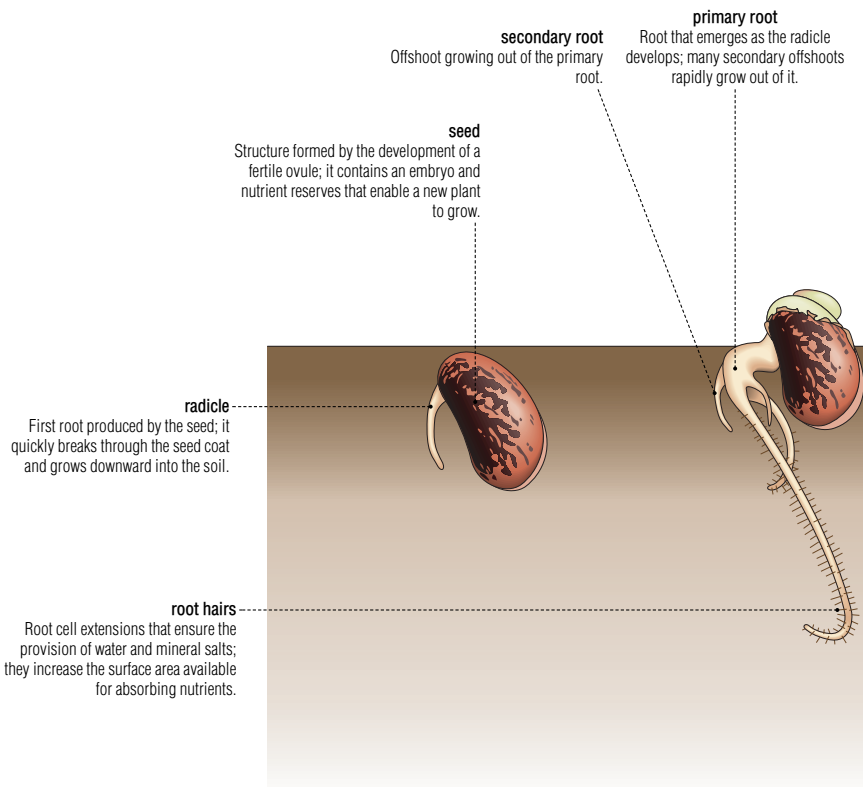
Third layer of soil to which the roots extend; contains little organic matter but many nutrients leached from the topsoil.

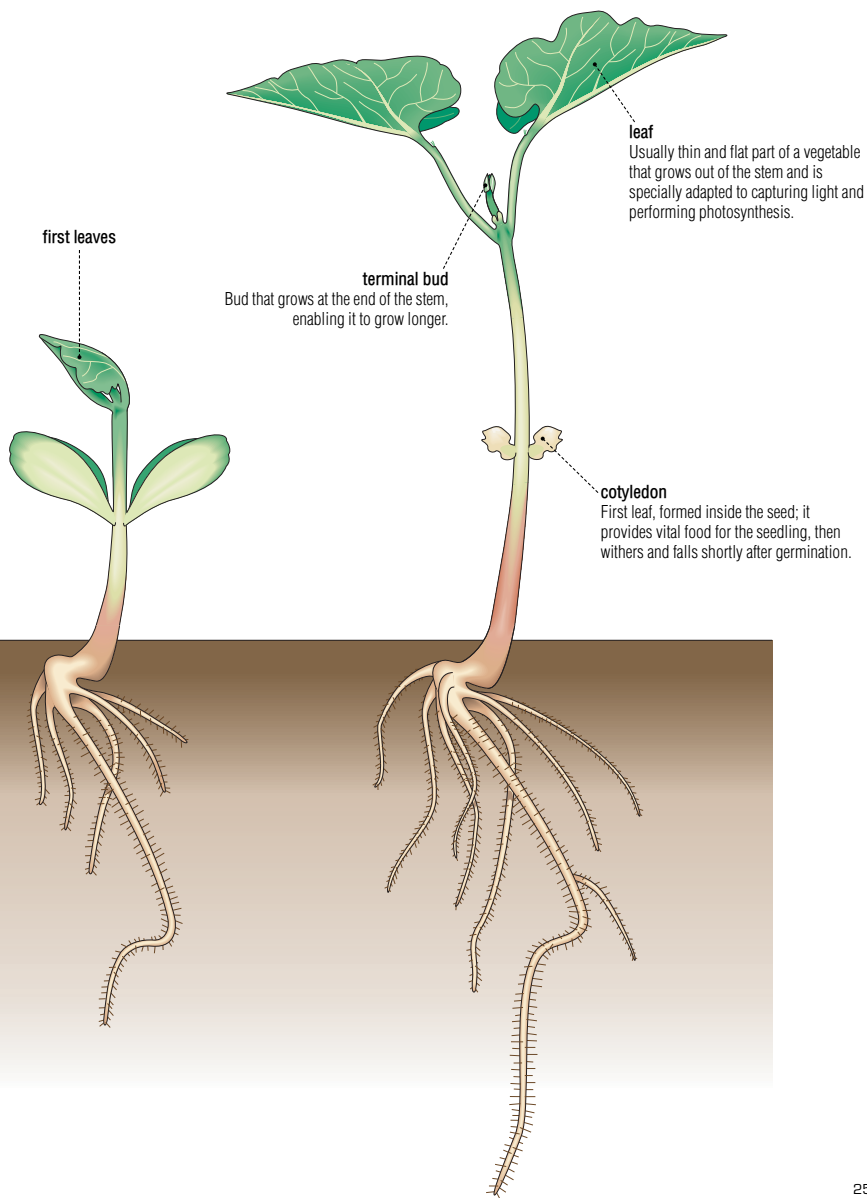
bedrock

Rock that forms the bottom layer of soil; its physical and chemical breakdown enables the upper layers to develop.

germination

Phenomenon by which, given favorable conditions, a seed will develop and grow into a plant.





photosynthesis

Phenomenon by which the plant, helped by solar energy, obtains its food (glucose) from the air and the soil and releases oxygen into the atmosphere.

solar energy

Energy derived from sunlight and absorbed through the chlorophyll, the green pigment found in plant leaves.

leaf

Part of the plant where photosynthesis takes place; it also helps oxygenate the ambient air and reduce carbon dioxide.

stem

Main part of the plant, extending from the soil to the terminal bud.

glucose

Organic food produced through photosynthesis and used by the plant to ensure growth; it is transported throughout the plant by the sap.

absorption of water and mineral salts

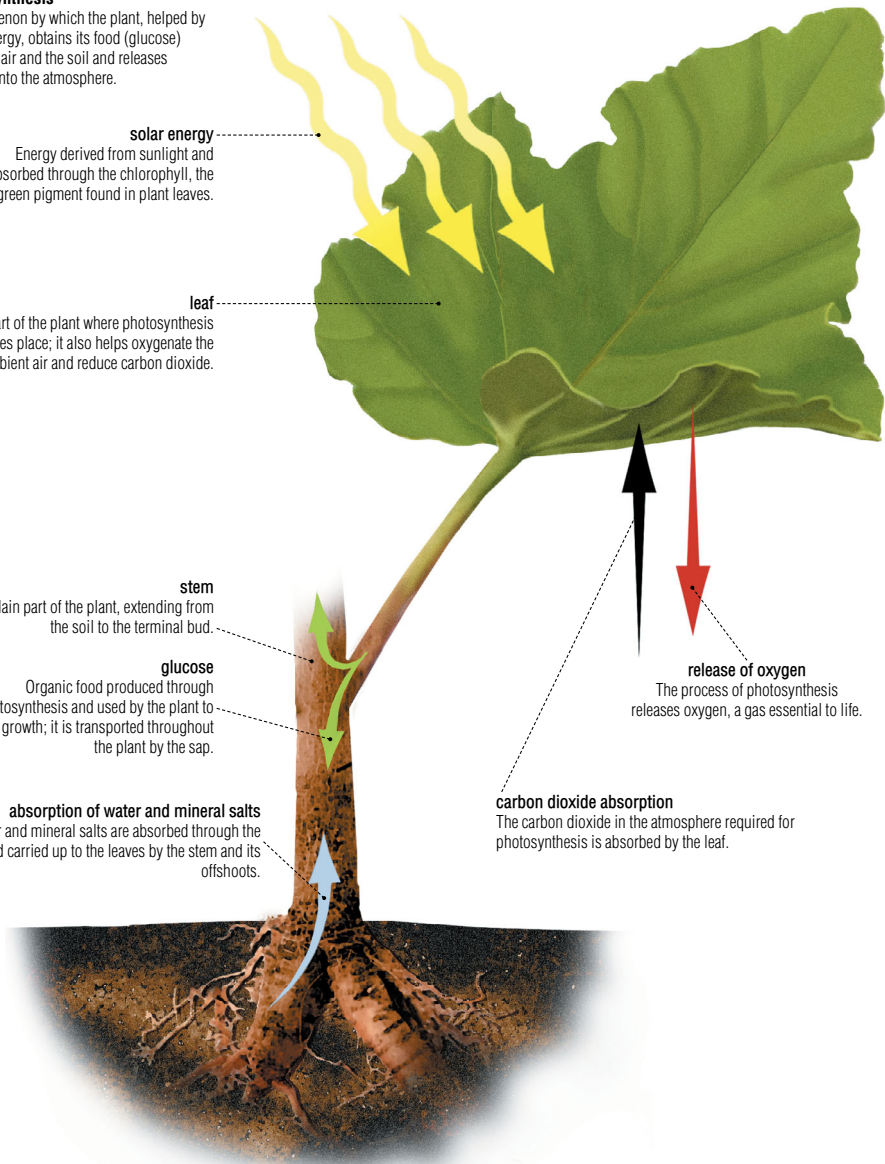
Water and mineral salts are absorbed through the roots and carried up to the leaves by the stem and its offshoots.

release of oxygen

The process of photosynthesis releases oxygen, a gas essential to life.

carbon dioxide absorption

The carbon dioxide in the atmosphere required for photosynthesis is absorbed by the leaf.



section of a bulb

Bulb: underground structure of certain plants where nutrients are stored; it ensures seasonal regrowth of the aboveground part of the plant.

scale leaf

Bulb's external casing; it is made of layered papery leaves.

bud

Small plantlike structure constituting a collection of immature organs that will develop once it opens.

fleshy leaf

Nutrient-rich leaf underneath the scale leaf.

bulbil

A secondary bulb that develops from a bud growing out of the side of the main bulb; it can break away and grow into a new plant.

underground stem

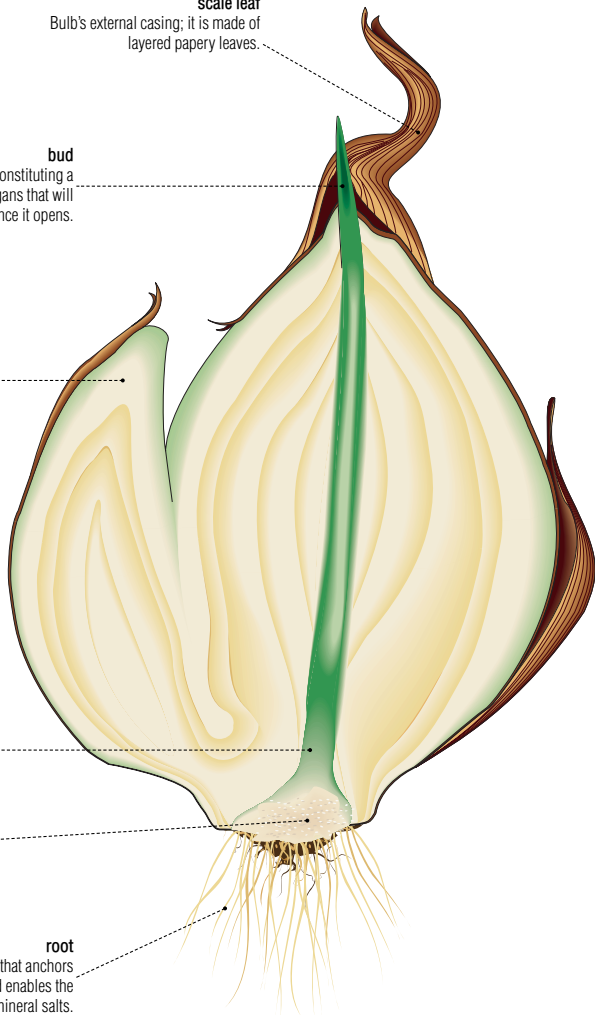
Main part of the bulb extending from the base to the bud and protected by fleshy leaves.

base

Round part located at the bulb's base from which the stem, roots and fleshy leaves grow.

root

Underground structure that anchors the plant to the soil and enables the plant to absorb water and mineral salts.



root

Underground structure that anchors the plant to the soil and enables the plant to absorb water and mineral salts.

primary root

Underground extension of the stem resulting from growth of the radicle.

ramification zone

Part of the root that produces secondary roots.

secondary root

Offshoot growing out of the primary root.

feeder root zone

Part of the root covered with absorbent hairs. It is always the same length, since the hairs degenerate as others form near the tip.

root hairs

Root cell extensions that ensure the provision of water and mineral salts; they increase the surface area available for absorbing nutrients.

growth zone

Part of the root where the new cells produced by the growing point extend and differentiate into specialized tissues.

growing point

Tip of the root, composed of cells that are in constant division.

root cap

Casing that covers the root tip and protects the root from abrasion as it grows downward into the soil.



examples of roots

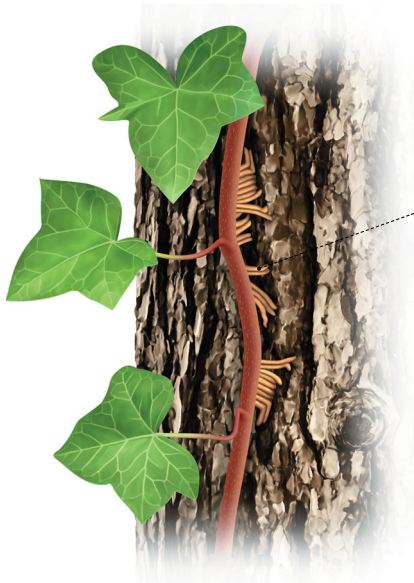
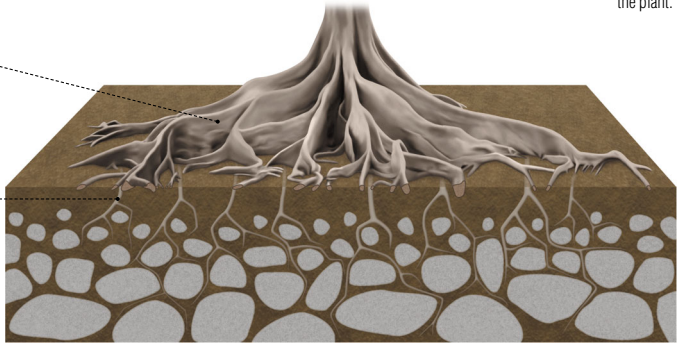
Roots, which usually grow underground, sometimes show major changes in structure in order to fill varied roles in the plant.

buttress roots

Large aboveground roots that support the trunk of certain trees growing in shallow soil.

underground roots

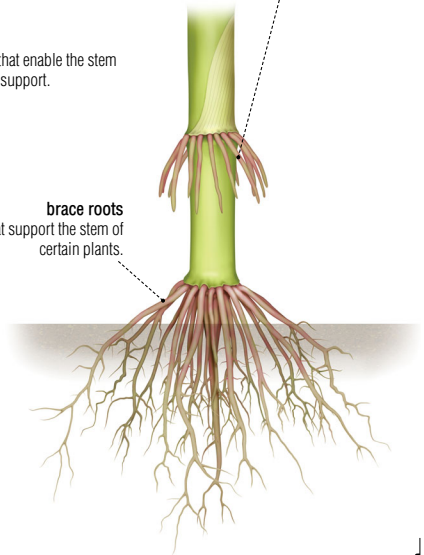
Roots that grow downward in the soil to absorb water and minerals. This is the most common type of root.

**claspers**

Small aerial roots that enable the stem to attach itself to a support.

aerial roots

Roots that develop above the ground.

**brace roots**

Aerial roots that support the stem of certain plants.

stem

Main part of the plant, extending from the soil to the terminal bud.

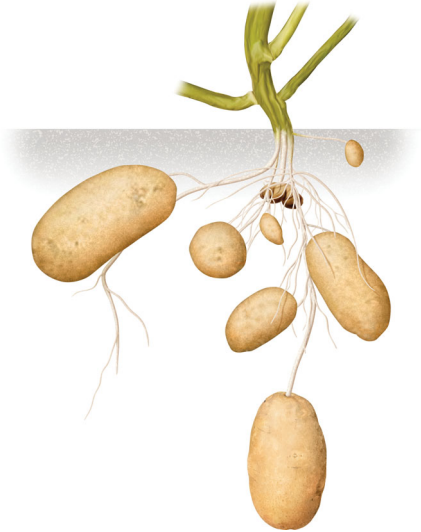
examples of stems

There are several types of roots, aerial and underground, that perform a wide variety of tasks.



rhizome

Underground stem where the plant stores nutritive elements.

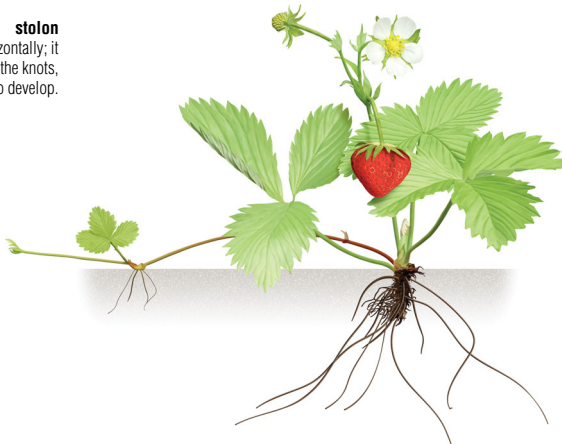


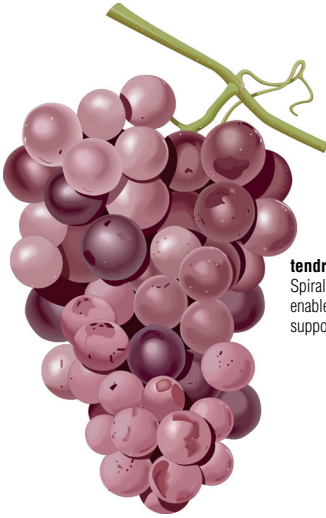
tuber

Underground protuberance of the stem containing the plant's nutritive reserves.

stolon

Thin stem that grows horizontally; it may send out roots at the knots, enabling a new plant to develop.

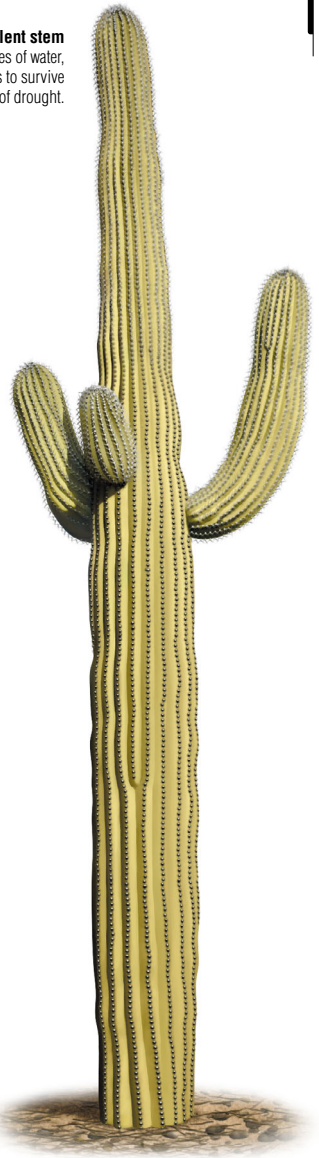


**tendrils**

Spiral-shaped excrescence that enables the stem to attach itself to a support.

**spiny stem**

Stem with hard, pointy protuberances designed to fend off animals.

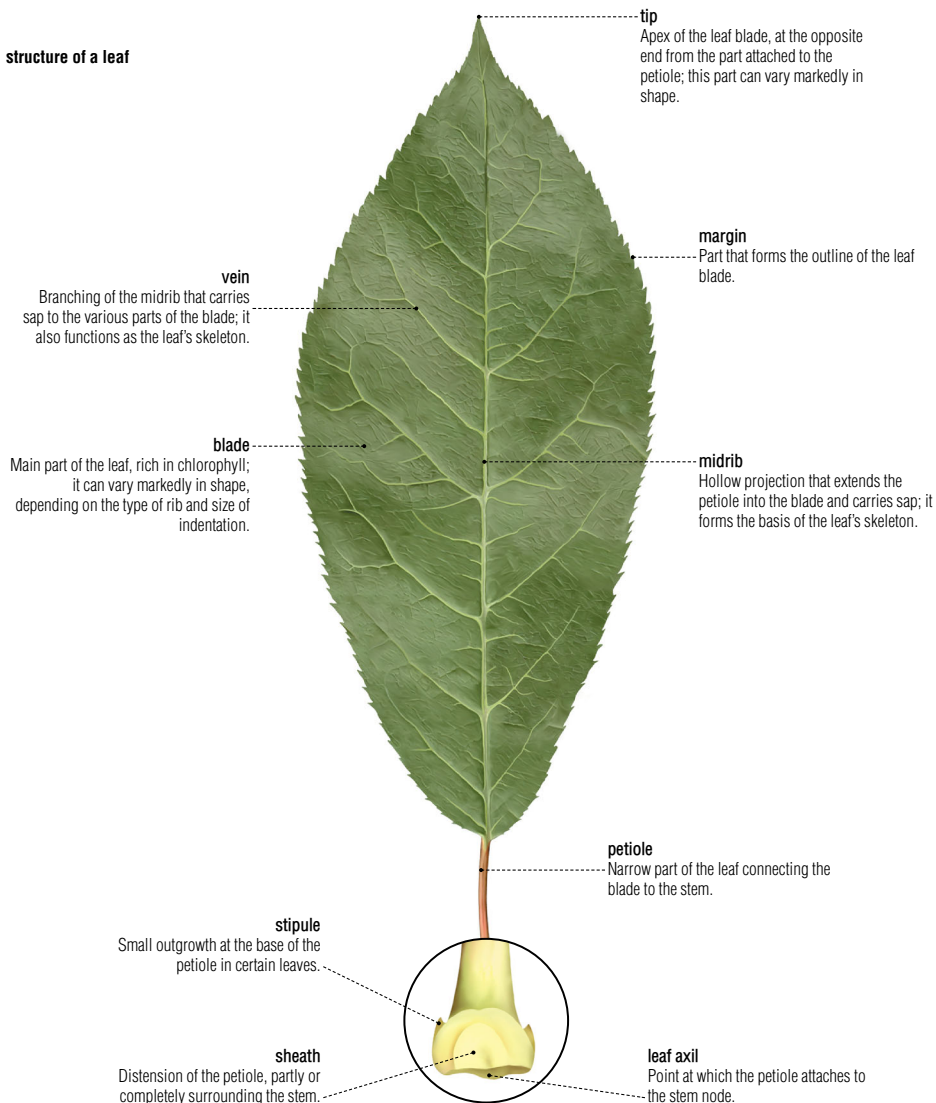
**succulent stem**

Stem engorged with reserves of water, enabling certain plants to survive during long periods of drought.

leaf

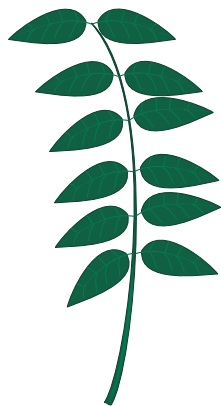
Usually thin and flat part of a vegetable that grows out of the stem and is specially adapted to capturing light and performing photosynthesis.

structure of a leaf



compound leaves

Leaves with blades divided into several distinct sections, called folioles, the arrangement of which determines the leaf type.

**abruptly pinnate**

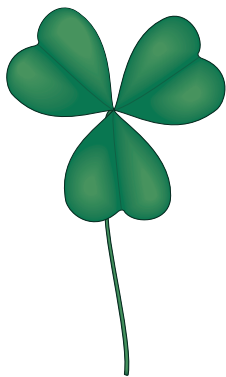
Compound feathered leaf ending in two folioles on each side of the main petiole.

**pinnatifid**

Compound leaf with folioles on both sides of a common petiole.

**odd pinnate**

Compound feathered leaf with a main petiole ending in a single foliole.

**trifoliate**

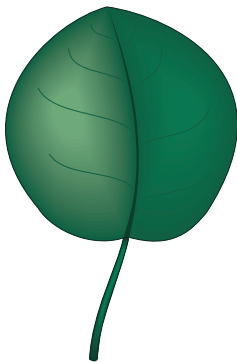
Leaf having three distinct folioles.

**palmate**

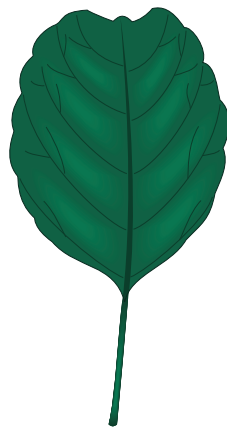
Compound leaf with all its folioles attached at the same point, at the apex of the petiole.

simple leaves

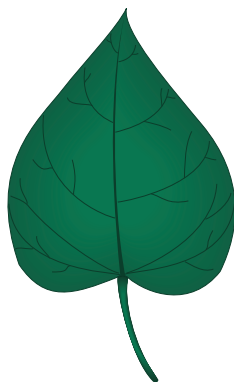
Leaves with an undivided blade; there are many types, grouped according to shape.

**orbiculate**

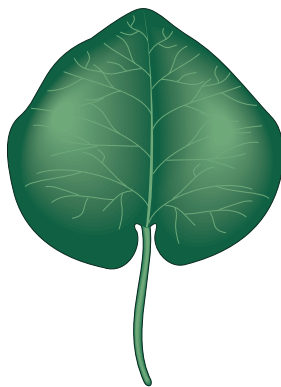
Simple leaf with a somewhat rounded blade.

**spatulate**

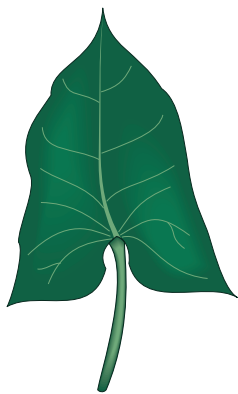
Simple leaf in which the blade widens, taking the shape of a spatula.

**cordate**

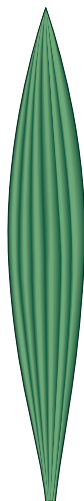
Simple leaf with a heart-shaped blade.

**reniform**

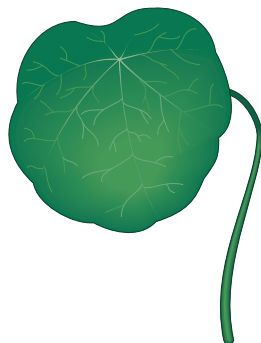
Simple leaf with a kidney-shaped blade.

**hastate**

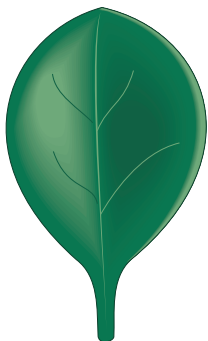
Simple leaf with a spear-shaped blade.

**lanceolate**

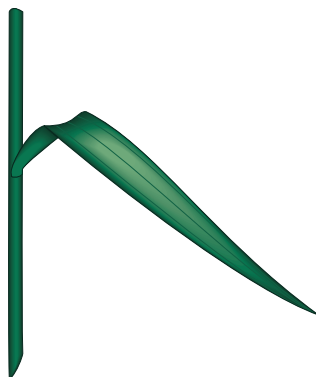
Simple leaf with a narrow blade that is longer than it is wide, ending in a point.

**peltate**

Simple leaf with a petiole attached perpendicularly to the center of the blade's underside.

**ovate**

Simple leaf with an egg-shaped blade.

**linear**

Simple leaf with a long and very narrow blade and almost parallel margins.

leaf margin

Leaf edges vary markedly, depending on the shape and depth of their indentations.

dentate

Leaf edged with pointy teeth of similar size.

**doubly dentate**

Leaf edged with teeth of different sizes, the main tooth often having smaller teeth.

**crenate**

Leaf edge with rounded teeth.

**ciliate**

Leaf edge surrounded by short thin hairs called cilia.

**entire**

Leaf edge with no indentations.

**lobate**

Leaf edge indented with deep notches.



leaf venation

Shape of the vein network in the blade of a leaf.

palmate leaf

Leaf whose petiole is divided into an odd number of veins, all spreading from a single point.

**single-veined leaf**

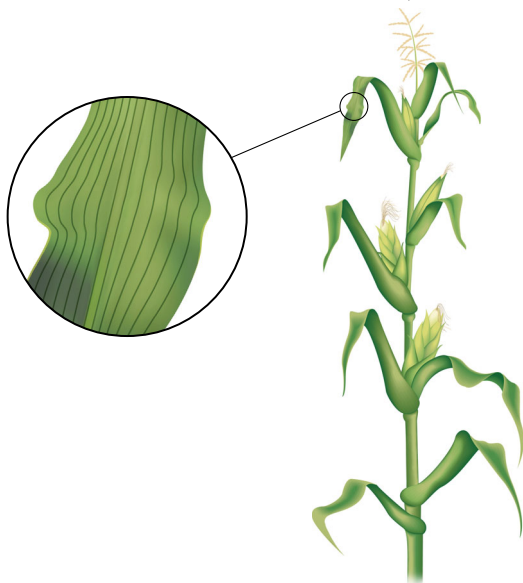
Leaf whose blade has only one vein.

**parallel-veined leaf**

Leaf whose blade has veins that run parallel to each other.

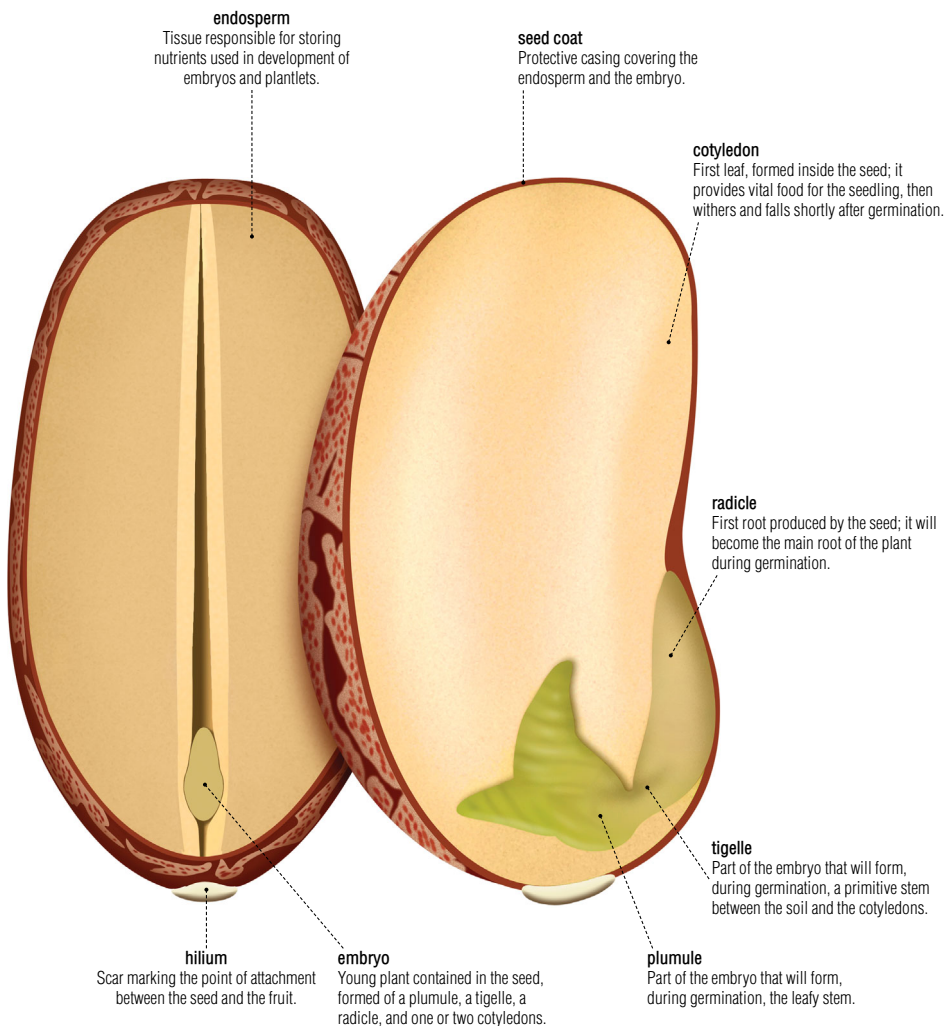
pinnate leaf

Leaf whose blade has a principal median vein and secondary veins arranged evenly on each side.

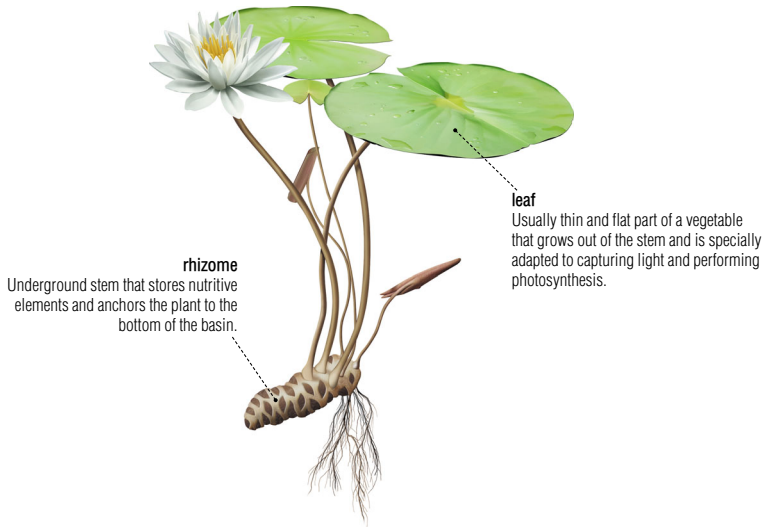


seed

Structure formed by the development of a fertile ovule; it contains an embryo and nutrient reserves that enable a new plant to grow.



Plant that lives totally or partially submerged in water.



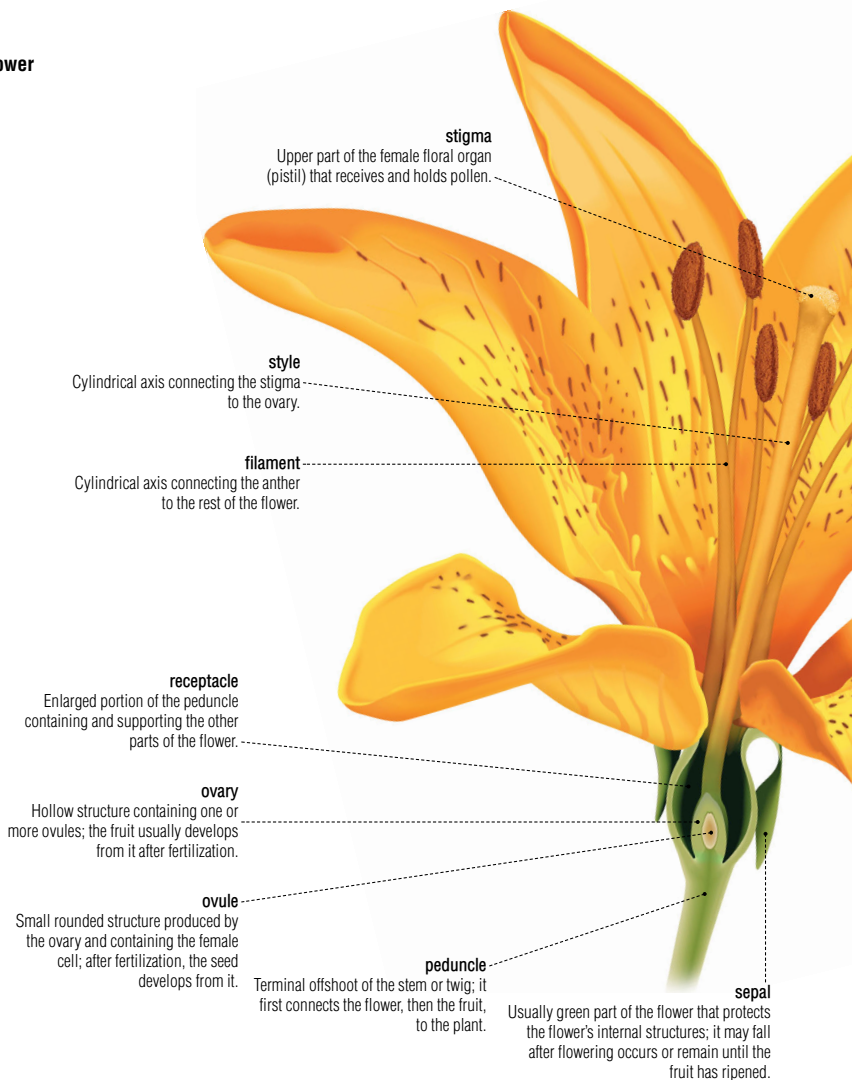
Plant with organs engorged with water that enable it to endure arid conditions; cacti are the best-known examples.

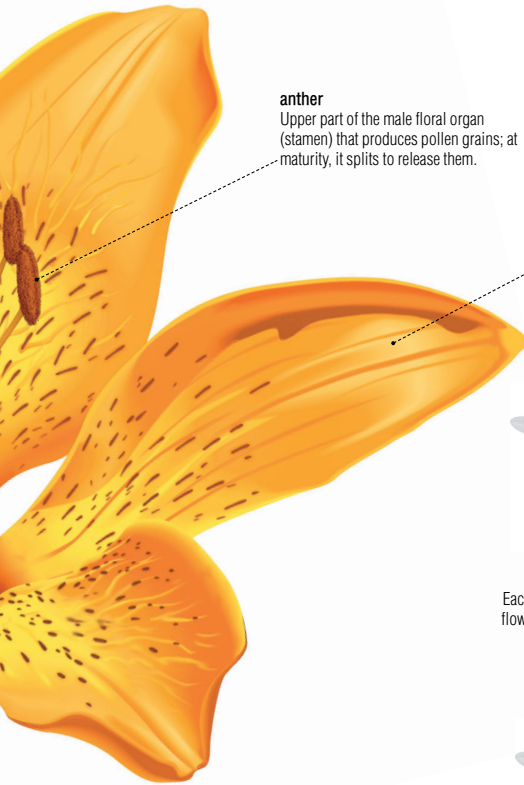


flower

Often colorful and fragrant part of certain vegetables that holds the reproductive organs; first it produces fruit, then seeds.

structure of a flower



**anther**

Upper part of the male floral organ (stamen) that produces pollen grains; at maturity, it splits to release them.

petal

Usually colorful and scented part of the flower that surrounds the male and female reproductive organs; it often helps attract pollinators.

**pistil**

Each of the female floral organs at the flower's center, consisting of an ovary, a stylus and a stigma.

**corolla**

Part of the flower composed of all its petals.

**stamen**

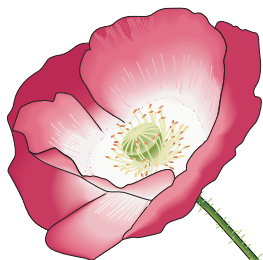
Each of the male floral organs, consisting of a filament and an anther.

**calyx**

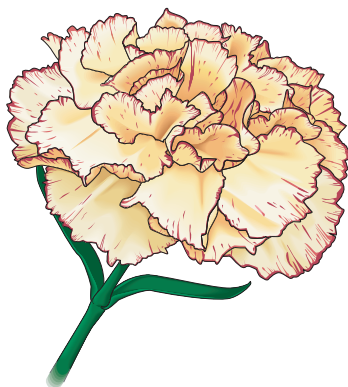
Part of the flower composed of all its sepals.

examples of flowers

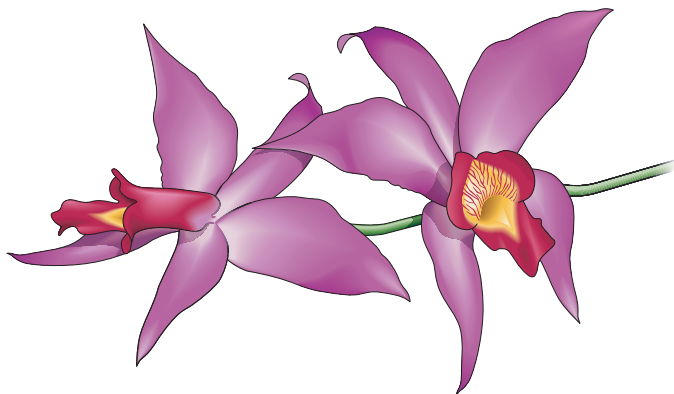
Flowers: there are more than 250,000 varieties of flowers, prized for their shapes, colors and great range of scents.

**poppy**

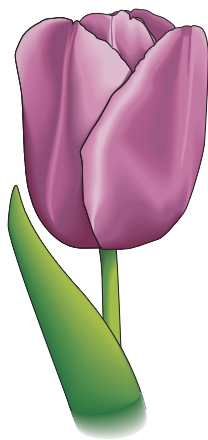
Bright red wildflower, related to the domestic poppy.

**carnation**

Strongly scented flower of various colors; it is sometimes worn as a boutonniere on special occasions.

**orchid**

Flower prized for the variety of its delicate shapes and colors; there are more than 15,000 species.

**tulip**

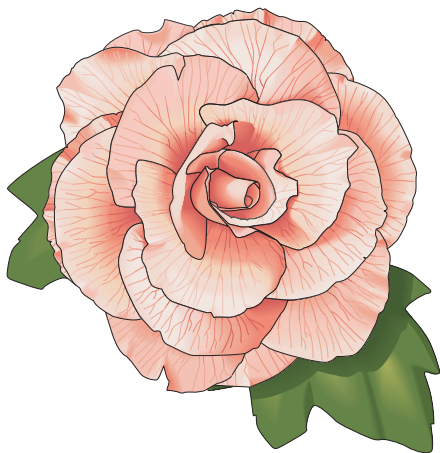
Flower whose petals grow in the shape of a rounded vase; there are approximately 100 differently colored species.

**violet**

Small flower with several ornamental varieties; it is also cultivated for perfume production and cooking.

**lily of the valley**

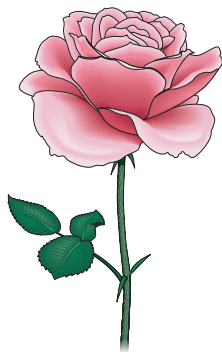
Small strongly scented bell-shaped white flower that grows in clusters.

**begonia**

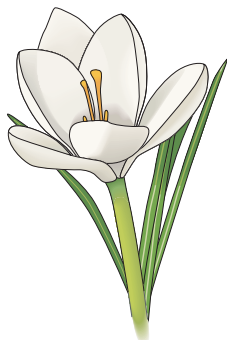
Decorative flower that is native to South America and prized for its vibrant colors.

**lily**

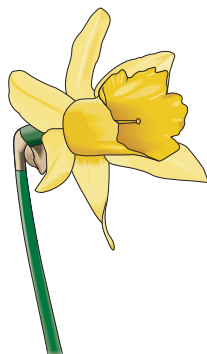
Large flower of various colors, prized for its beauty; the white lily is the symbol of French royalty and the emblem of Quebec.

**rose**

Flower cultivated for its beauty, scent and range of colors; it is used in floral arrangements.

**crocus**

Small white flower that blooms with the first warm rays of spring sunshine.

**daffodil**

Fairly tall bright yellow flower that blooms in the spring.

**buttercup**

Wildflower with usually bright-yellow petals, widespread in fields and prairies.

**sunflower**

Tall flower whose seeds provide a high-quality cooking oil. The head always turns toward the Sun, hence its name.

**primrose**

Small decorative flower in various colors that blooms early in the spring.

**daisy**

Flower with a yellow center and usually white petals, common in fields and woodlands.

**dandelion**

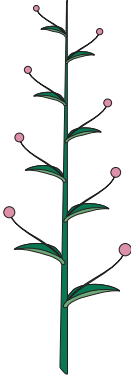
Very common flower composed of dozens of small, tightly bunched florets.

**thistle**

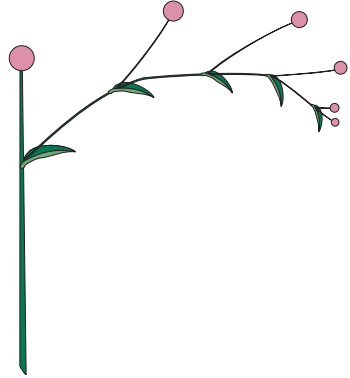
Wildflower whose receptacle is covered with modified leaves covered with spines.

types of inflorescences

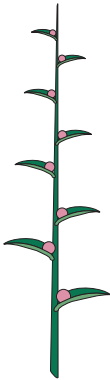
Inflorescence: the arrangement of flowers on the stem or twig of a plant.

**raceme**

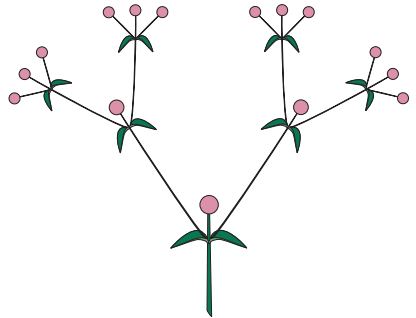
Inflorescence composed of a main axis and laterally borne flowers with pedicels of equal length.

**uniparous cyme**

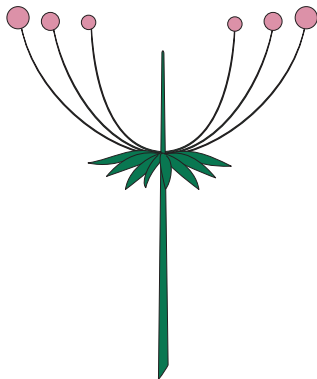
Inflorescence whose main axis ends in a flower under which a single lateral twig develops; the process is repeated under each terminal flower.

**spike**

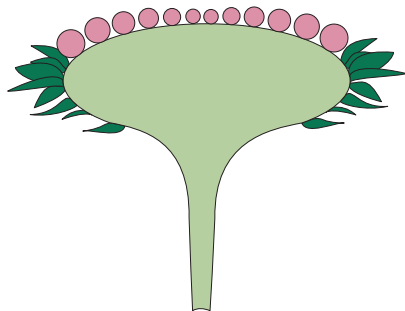
Inflorescence composed of a main axis and laterally borne flowers with no pedicel.

**biparous cyme**

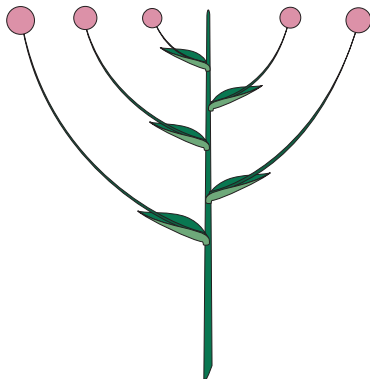
Inflorescence whose main axis ends in a flower under which two lateral twigs develop; the process is repeated under each terminal flower.

**umbel**

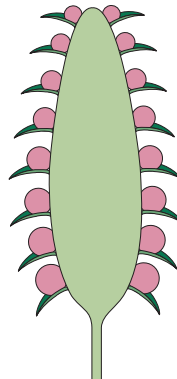
Inflorescence composed of a main axis and laterally borne flowers with pedicels of equal length, all originating from the same point.

**capitulum**

Inflorescence composed of flowers with no pedicel, all embedded in a flat receptacle.

**corymb**

Inflorescence composed of a main axis and laterally borne flowers with pedicels of unequal length, all ending at the same height.

**spadix**

Inflorescence composed of flowers with no pedicel, all embedded in an elongated ovoid receptacle.

fruits

Vegetable structures usually resulting from the development of one or several floral ovaries that, once mature, contain seeds; they are often edible.

stone fleshy fruit

Fruit whose seed is surrounded by three distinct layers: an exocarp, a fleshy mesocarp and an extremely hard stone, or endocarp.

technical terms

peduncle

Part of the fruit that once attached it to the terminal offshoot of the twig or branch.

exocarp

Fruit's outer layer, covering the mesocarp.

mesocarp

Plump part of the fruit, usually sweet and juicy.

seed coat

Protective casing covering the embryo and the nutrients stored in the seed.

seed

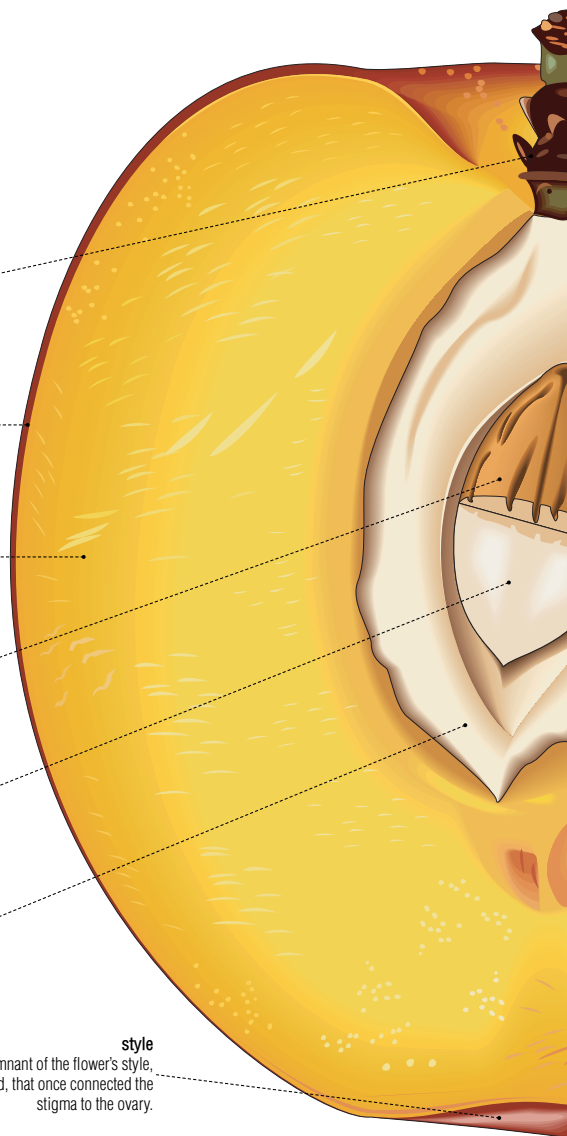
Structure formed by the development of a fertile ovule; it contains an embryo and nutrient reserves that enable a new plant to grow.

endocarp

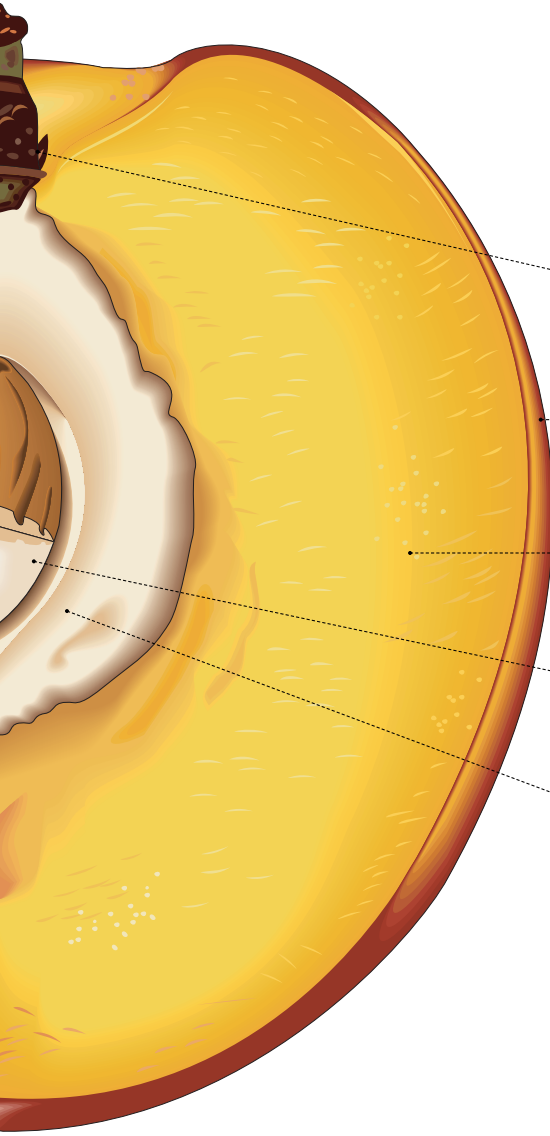
Fruit's interior layer that surrounds and protects the seed; it is rough and extremely hard.

style

Visible remnant of the flower's style, now withered, that once connected the stigma to the ovary.



section of a peach

**usual terms****stalk**

Part of the fruit that once attached it to the terminal offshoot of the twig or branch.

skin

Fruit's outer layer, covering the flesh.

flesh

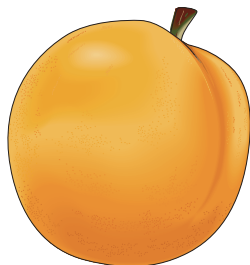
Plump part of the fruit, usually sweet and juicy.

kernel

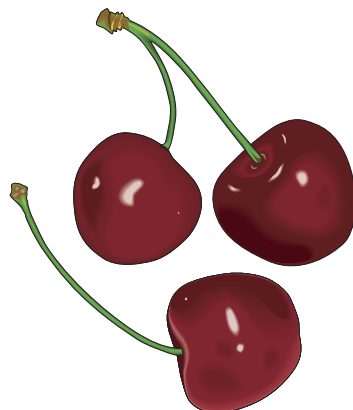
Structure formed by the development of a fertile ovule; it contains an embryo and nutrient reserves that enable a new plant to grow.

stone

Fruit's interior layer that surrounds and protects the seed; it is rough and extremely hard.

**apricot**

Often eaten dried or candied, its orange flesh can be mushy if picked before fully ripe; the kernel inside the stone contains a toxic substance.

**cherry**

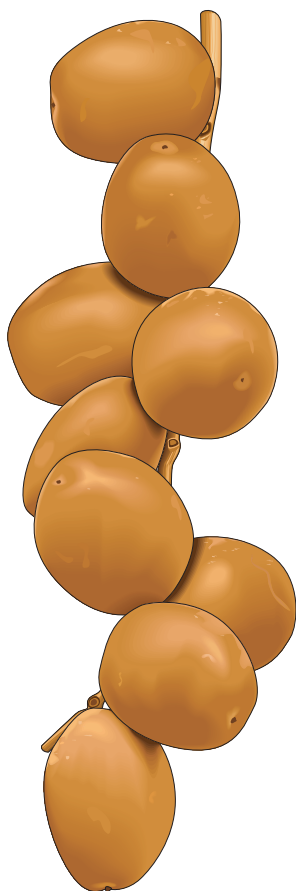
An essential ingredient in Black Forest cake and, candied, in fruitcake; when artificially colored and flavored, it is used as a cocktail garnish.

**plum**

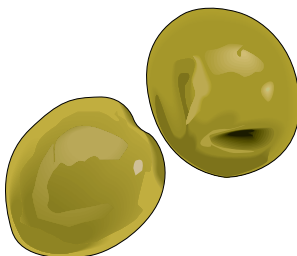
Of various colors and sizes, it is excellent either raw or cooked and is used especially to make chutney; the dried plum is called a prune.

**nectarine**

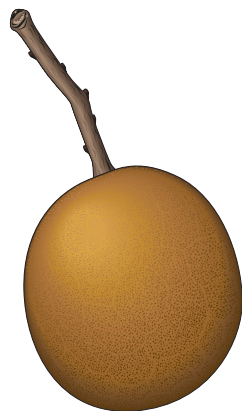
Differentiated from the peach by its smooth, more colorful skin and by its more flavorful flesh; like the peach, it is eaten raw or used in certain desserts.

**date**

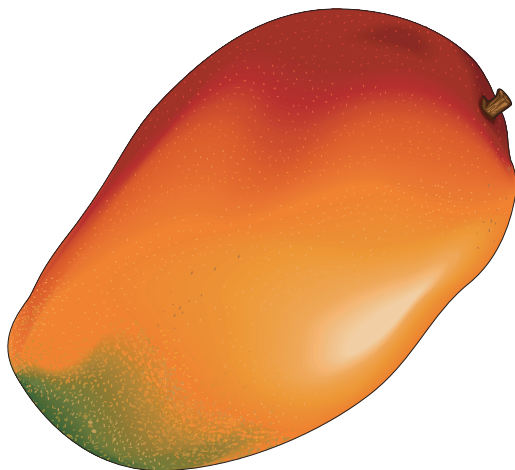
Has a high sugar content and is often sold dried; in North America, it is primarily associated with baked goods, such as squares, muffins and cakes.

**olive**

Inedible when raw, the olive is treated to reduce its bitter taste, then cured in brine or sometimes in oil.

**longan**

Stone fruit, related to the litchi, whose whitish translucent flesh is sweet and juicy; the peeled and stoned fruit is often eaten plain.

**mango**

Fruit with a flattened stone and a skin that should be discarded, as it irritates the mouth; it is mostly eaten ripe, but sometimes used green, as a vegetable.

fleshy fruit: citrus fruit

Fruit composed of several segments, each one enclosing seeds that are in direct contact with the pulp.

technical terms**wall**

Thin membrane separating the citrus fruit into segments.

seed

Structure formed by the development of a fertile ovule; it contains an embryo and nutrient reserves that enable a new plant to grow.

juice sac

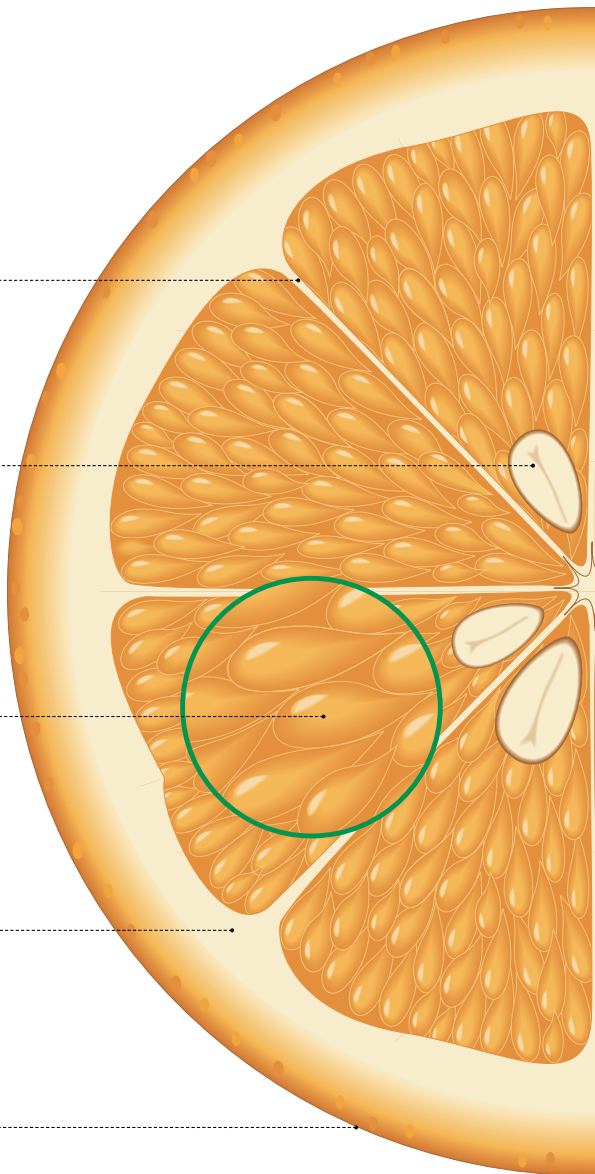
Each of the small juice-filled pockets that combine to make up the fruit's pulp.

mesocarp

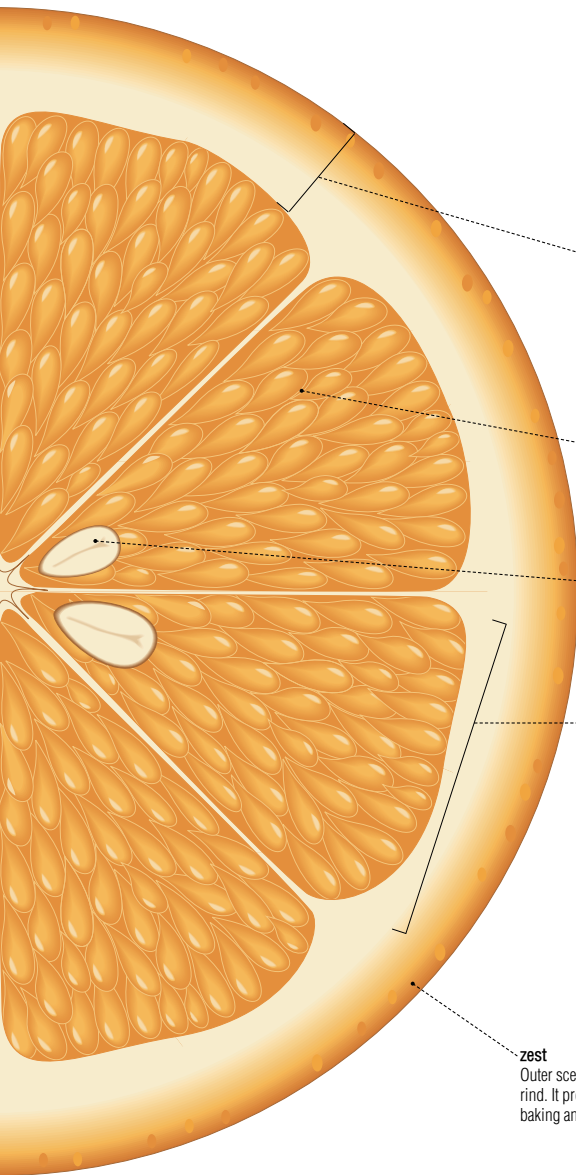
Designates the whitish part of the rind of a citrus fruit.

exocarp

Fruit's outer layer, covering the mesocarp.



section of an orange

**usual terms****rind**

Fruit's outer layer covering the pulp, composed of an outer colored part and an inner part made of whitish tissue.

pulp

Fleshy portion of the citrus fruit, composed of small juice-filled pockets in every segment.

pip

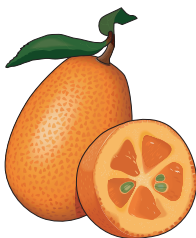
Structure formed by the development of a fertile ovule; it contains an embryo and nutrient reserves that enable a new plant to grow.

segment

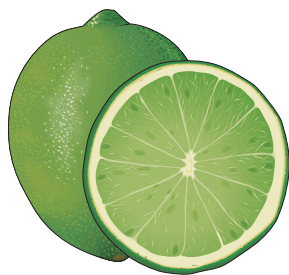
Part of a citrus fruit surrounded by a thin membrane containing the pulp and seeds; each segment derives from separate ovaries within a single flower.

zest

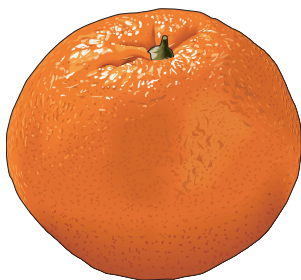
Outer scented layer of the citrus fruit's rind. It produces an essence used in baking and an essential oil.

**kumquat**

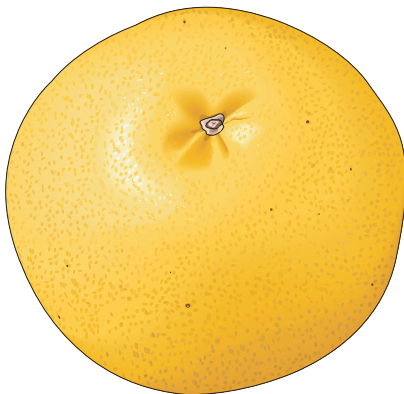
Small citrus fruit, .75 to 2 in long with a sweet tender rind that can be eaten unpeeled; its flavor is enhanced through light steeping.

**lime**

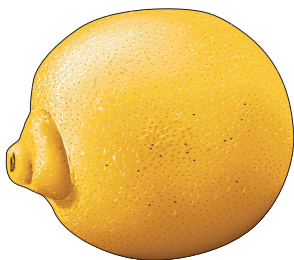
Intensely fragrant and used like the lemon; it is an essential ingredient in ceviche, a raw marinated fish dish.

**mandarin**

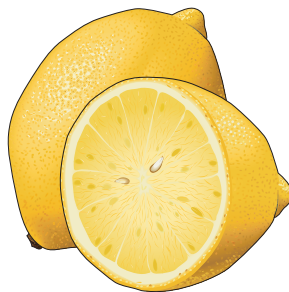
Similar to a small, slightly flattened orange, it is less acidic than most citrus fruits and is often eaten as is; it peels easily.

**grapefruit**

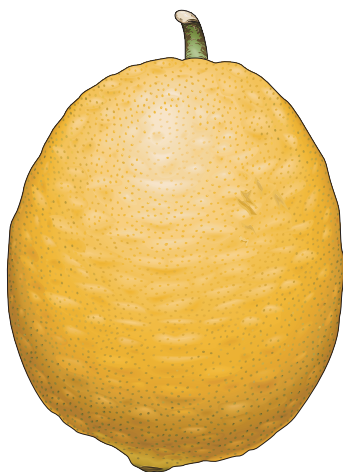
The pink grapefruit is sweeter and less bitter than the white one that has yellow flesh; it is often cut in half and eaten plain, with a spoon.

**bergamot**

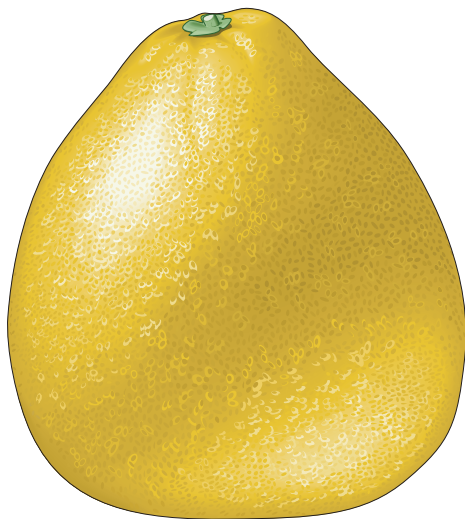
Because its greenish flesh is inedible, it is primarily used for the zest and essential oil derived from its rind, especially in Earl Grey tea.

**lemon**

Highly acidic, it is especially used to flavor various recipes and enhance the flavor of certain foods; it is the main ingredient in lemonade.

**citron**

Extensively grown in Corsica and Israel, this somewhat dry fruit is rarely found fresh and is mostly sold candied.

**pomelo**

Extremely popular in many Asian countries, it has only recently become available in the West; less juicy than the grapefruit, it is mostly cooked or candied.

fleshy fruit: berry fruit

Fruit in which the seed is surrounded by two distinct layers: an exocarp and a fleshy mesocarp that is in direct contact with the seed.

technical terms**pedicel**

Part of the fruit that once connected it to the cluster's peduncle.

exocarp

Fruit's outer layer, covering the mesocarp.

funiculus

Slender strand that connects the seed to the grape's pedicel; it is used to transport food to the developing seed.

seed

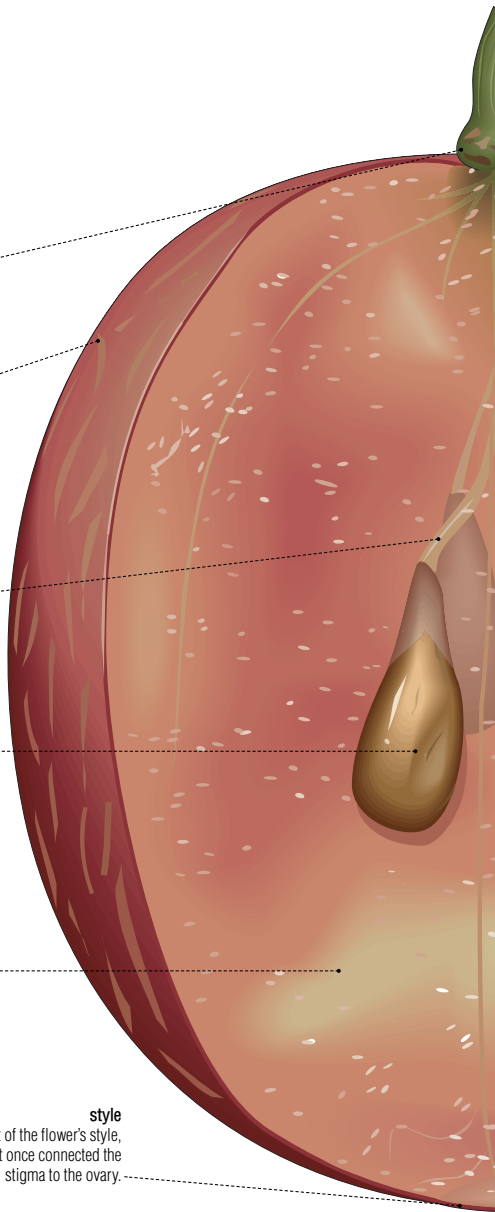
Structure formed by the development of a fertile ovule; it contains an embryo and nutrient reserves that enable a new plant to grow.

mesocarp

Plump part of the fruit, usually sweet and juicy.

style

Visible remnant of the flower's style, now withered, that once connected the stigma to the ovary.



section of a grape

usual terms**stalk**

Part of the fruit that once connected it to the cluster's peduncle.

skin

Fruit's outer layer, covering the flesh.

pip

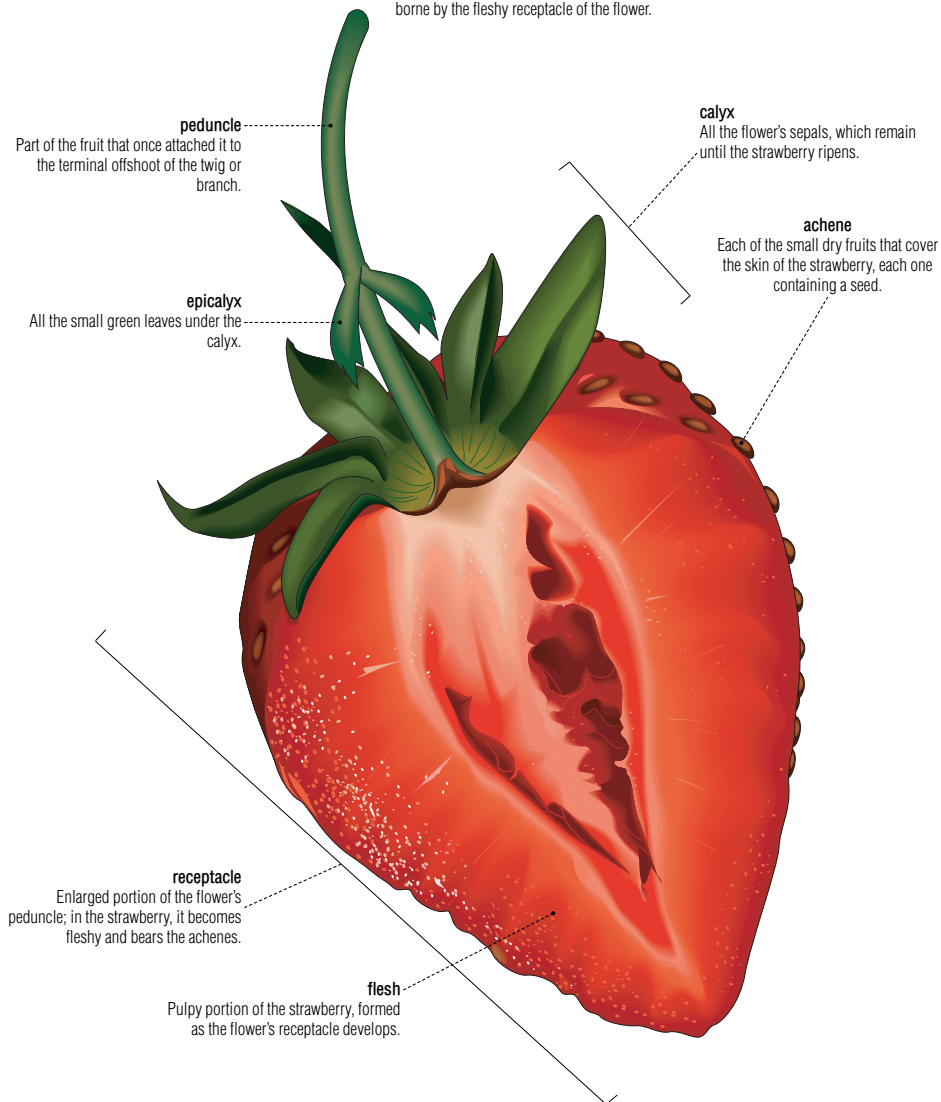
Structure formed by the development of a fertile ovule; it contains an embryo and nutrient reserves that enable a new plant to grow.

flesh

Plump part of the fruit, usually sweet and juicy.

section of a strawberry

The strawberry is a complex fruit, with achenes borne by the fleshy receptacle of the flower.



section of a raspberry

The raspberry is an aggregate fruit; it consists of a number of small fleshy fruits attached to a common receptacle.

peduncle

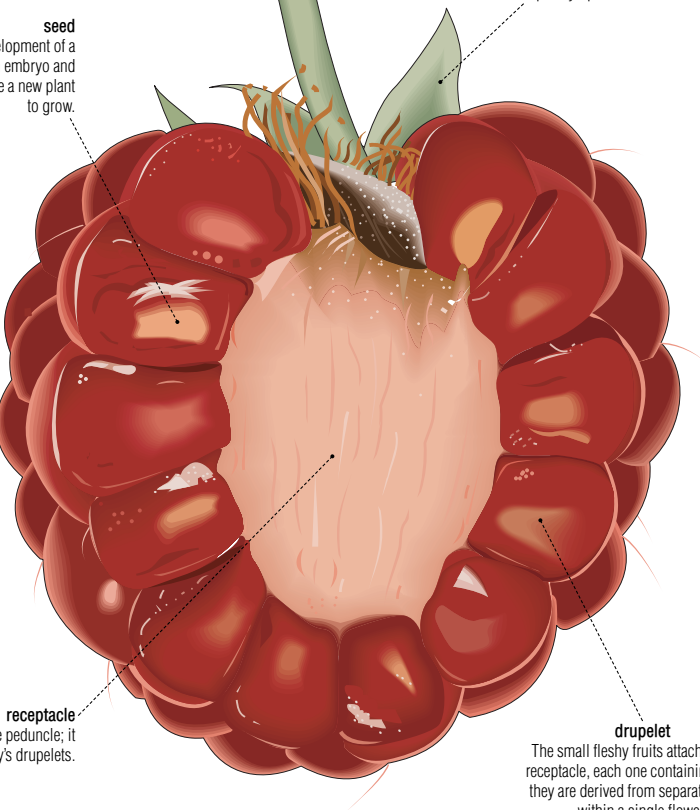
Part of the fruit that once attached it to the terminal offshoot of the twig or branch.

seed

Structure formed by the development of a fertile ovule; it contains an embryo and nutrient reserves that enable a new plant to grow.

sepal

The flower's sepal remains until the raspberry ripens.

**receptacle**

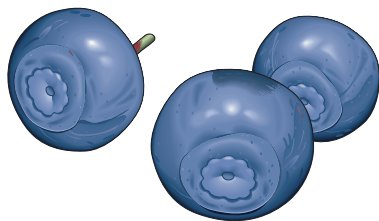
Enlarged portion of the peduncle; it holds the raspberry's drupelets.

drupelet

The small fleshy fruits attached to the receptacle, each one containing a seed; they are derived from separate ovaries within a single flower.

**blueberry**

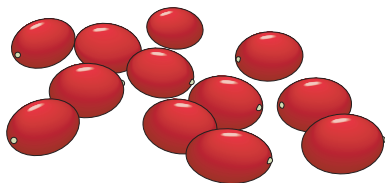
Little known outside its native North America, it is primarily eaten plain or in desserts; the lowbush variety is the sweetest.

**bilberry**

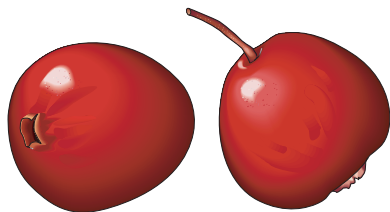
Although not related to it, this berry of Europe and Asia resembles the blueberry and is used like it.

**blackberry**

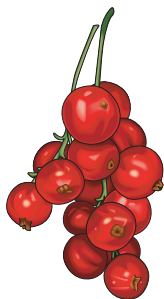
Grows on canes as does the raspberry, and is used like that fruit; not to be confused with the fruit of the bramble bush, which grows several meters high.

**red whortleberry**

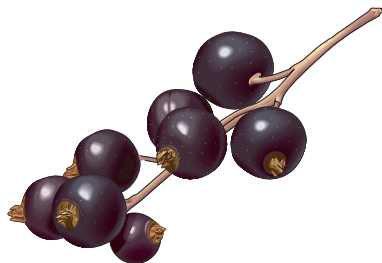
Closely related to the cranberry, this small tart berry is somewhat bitter and rarely eaten raw; it is used instead to make sauces, jams and desserts.

**cranberry**

Too tart to be eaten raw, it is primarily used for making desserts, sauces or juice; a traditional accompaniment to turkey in North America.

**currant**

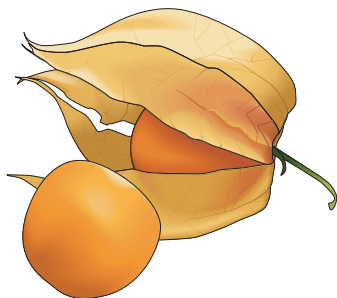
Small red or white currant primarily eaten cooked due to its sour taste; its juice can replace vinegar in salad dressing.

**black currant**

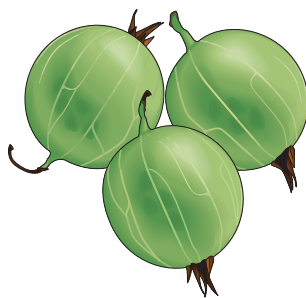
Black berry primarily used to make coulis, jellies, wine and liqueurs such as crème de cassis, an ingredient in kir.

**arbutus berry**

Fruit from the Mediterranean region, with a granular skin; it is used mainly in the manufacture of jams and jellies.

**alkekengi**

Covered in a thin, inedible membrane, it is slightly tart and not very sweet; it is often used to make jams and jellies because of its high pectin content.

**gooseberry**

Larger than the clustered berries, it is especially popular in Europe; the British use it to make a chutney that is served with mackerel.

**Japanese persimmon**

This national fruit of Japan is often eaten plain, with a spoon; the fuyu variety is eaten like an apple.

**kiwi**

Its juicy, slightly acidic green flesh has a high vitamin C content; delicious plain, its downy skin is generally discarded, although it can be eaten.

**carambola**

Within the delicate edible skin is a juicy, slightly acidic flesh that can be eaten raw or cooked, as a fruit or vegetable.

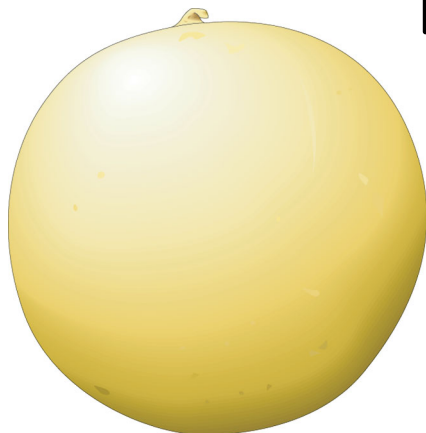
watermelon

This thirst-quenching fruit, named for its high water content, is primarily eaten plain, in slices.



**horned melon**

Its green flesh contains soft edible seeds, similar to those of the cucumber; it is often peeled and then made into juice.

**honeydew melon**

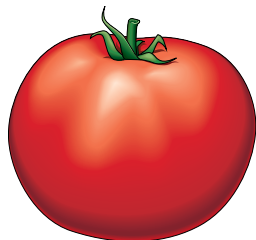
Owes its name to its very sweet, green flesh; its smooth firm rind turns creamy-yellow as it ripens.

**muskmelon**

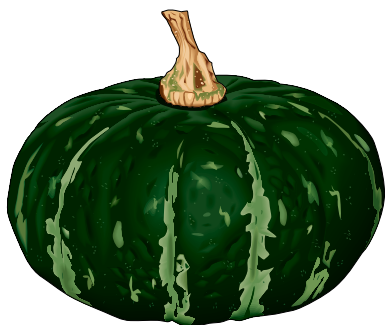
Named for the characteristic musky smell of its flesh; it has a textured rind and its flavorful flesh is pink or orange.

**cantaloupe**

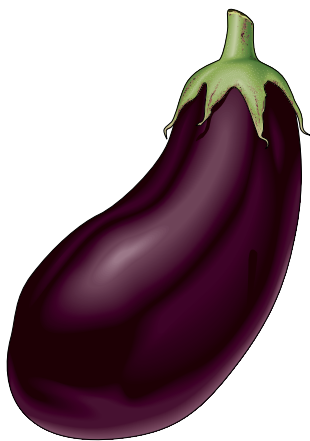
This orange-fleshed melon is characterized by its patterned textured ribs; the most widely cultivated variety is the charentais.

**tomato**

Native to Central America, this fruit is essential to Italian, Provençal, Greek and Spanish cooking.

**autumn squash**

The rind can be yellow, orange or green; often confused with the pumpkin, it can be recognized by its pedicel, which is soft and enlarged where it attaches to the vegetable.

**eggplant**

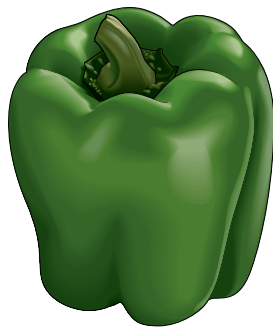
Yellowish and spongy-fleshed vegetable that is sometimes sweated with salt to alleviate its bitter taste.

**pumpkin**

Used primarily in North America, it can be recognized by its hard fibrous pedicel; its flesh is widely used in soups and desserts and its edible seeds are dried.

**cucumber**

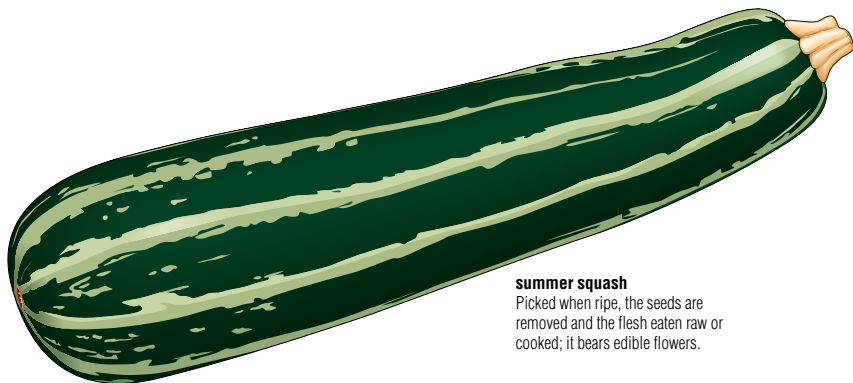
Related to squash and melons, it bears seeds and is usually eaten raw.

**green sweet pepper**

Mild pepper picked before fully ripe, it is used in many typical Mexican and Portuguese dishes.

**zucchini**

Small white-fleshed squash picked before fully ripe; it is an essential ingredient in ratatouille.

**summer squash**

Picked when ripe, the seeds are removed and the flesh eaten raw or cooked; it bears edible flowers.

pome fleshy fruit

Fruit with a seed, or pip, surrounded by three distinct layers: an exocarp, a fleshy mesocarp and a stiff endocarp containing loculi.

technical terms**peduncle**

Part of the fruit that once attached it to the terminal offshoot of the twig or branch.

loculus

Small cavity located under the endocarp, usually containing two seeds.

seed

Structure formed by the development of a fertile ovule; it contains an embryo and nutrient reserves that enable a new plant to grow.

mesocarp

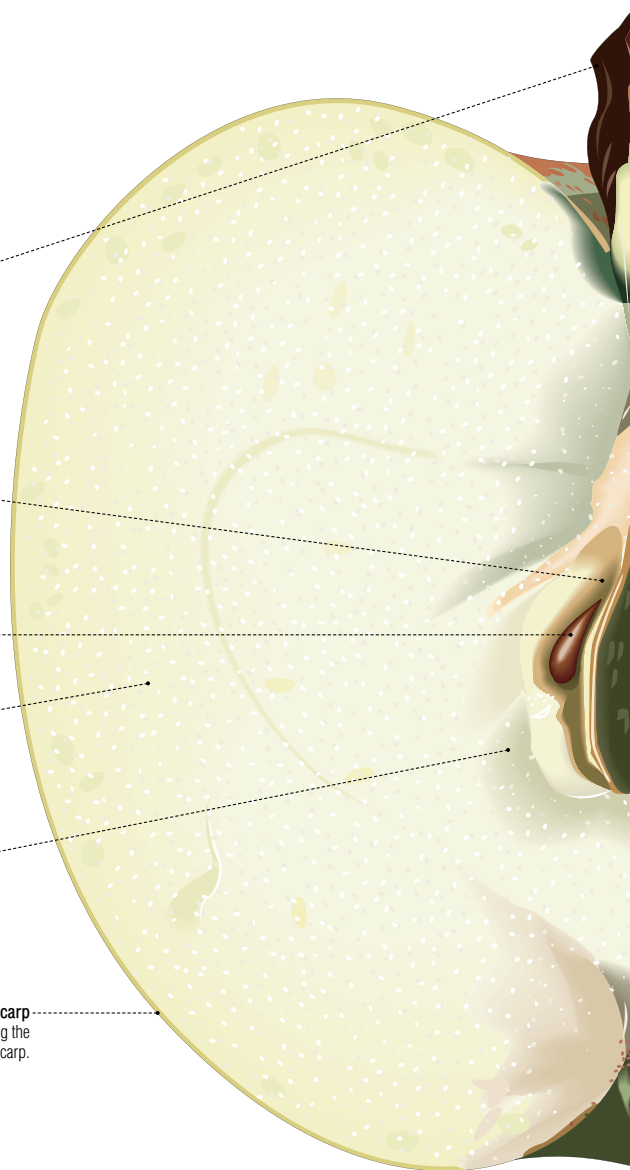
Plump part of the fruit, usually sweet and juicy.

endocarp

The stiff inner layer of the fruit, surrounding and protecting the seed and covering the loculi.

exocarp

Fruit's outer layer, covering the mesocarp.



section of an apple

usual terms

stalk

Part of the fruit that once attached it to the terminal offshoot of the twig or branch.

skin

Fruit's outer layer, covering the flesh.

pip

Structure formed by the development of a fertile ovule; it contains an embryo and nutrient reserves that enable a new plant to grow.

flesh

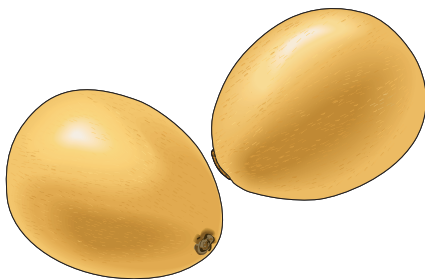
Plump part of the fruit, usually sweet and juicy.

core

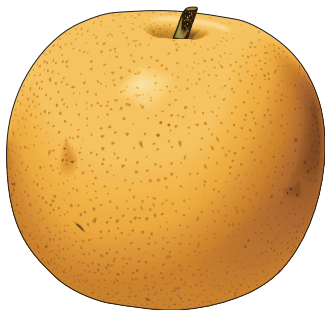
Central inedible part of the apple, comprising the endocarp, the loculi and the seeds within the loculi.

sepal

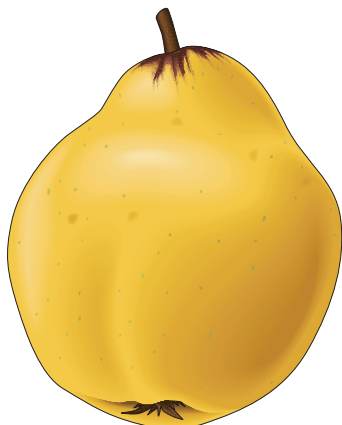
Remnant of the flower's sepal, visible as small flowers around a depression on the bottom of the fruit.

**Japanese plum**

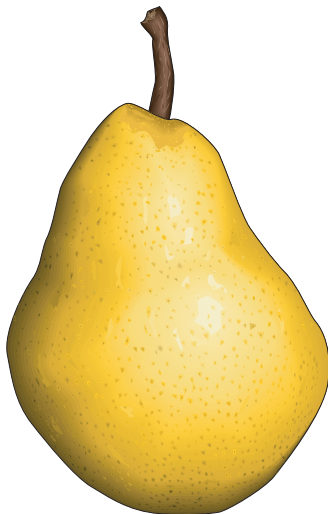
Has thin skin, sometimes covered in fine hairs, that envelops juicy, somewhat sour flesh; whether raw or cooked, it tastes somewhat like cherries or plums.

**Asian pear**

Most popular Asian fruit, primarily eaten plain; its flesh is sweet and juicy, like the pear's, and crunchy, like the apple's.

**quince**

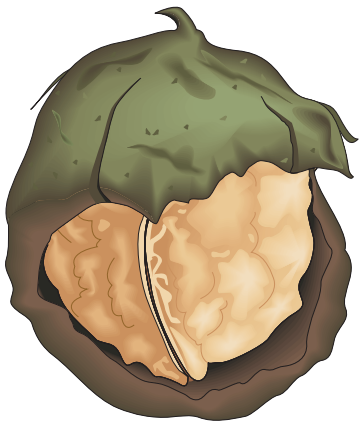
Fruit of the quince tree, native to warm climates; inedible raw, it is traditionally made into jams and jellies.

**pear**

Among its many and varied uses, it forms the basis for a fruit brandy; it is picked before fully ripe to prevent the flesh from acquiring a granular texture.

husk

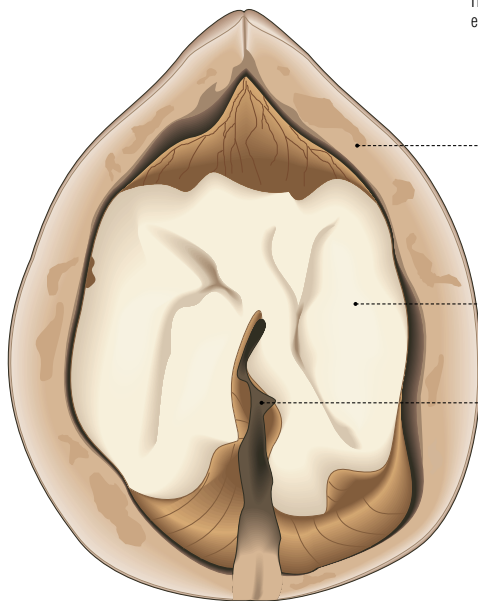
Fleshy covering, first green then changing to brown, that protects the walnut shell. The husk is used to produce a stain that makes white wood look like walnut.

**dry fruits**

Fruits with usually edible seeds, surrounded by a single dry, somewhat rigid layer.

section of a walnut

The fruit of the walnut tree is the nut, which has an edible seed; its stone, or shell, is surrounded by a fleshy husk.

**shell**

Hard fibrous ovoid casing that covers and protects the green walnut.

green walnut

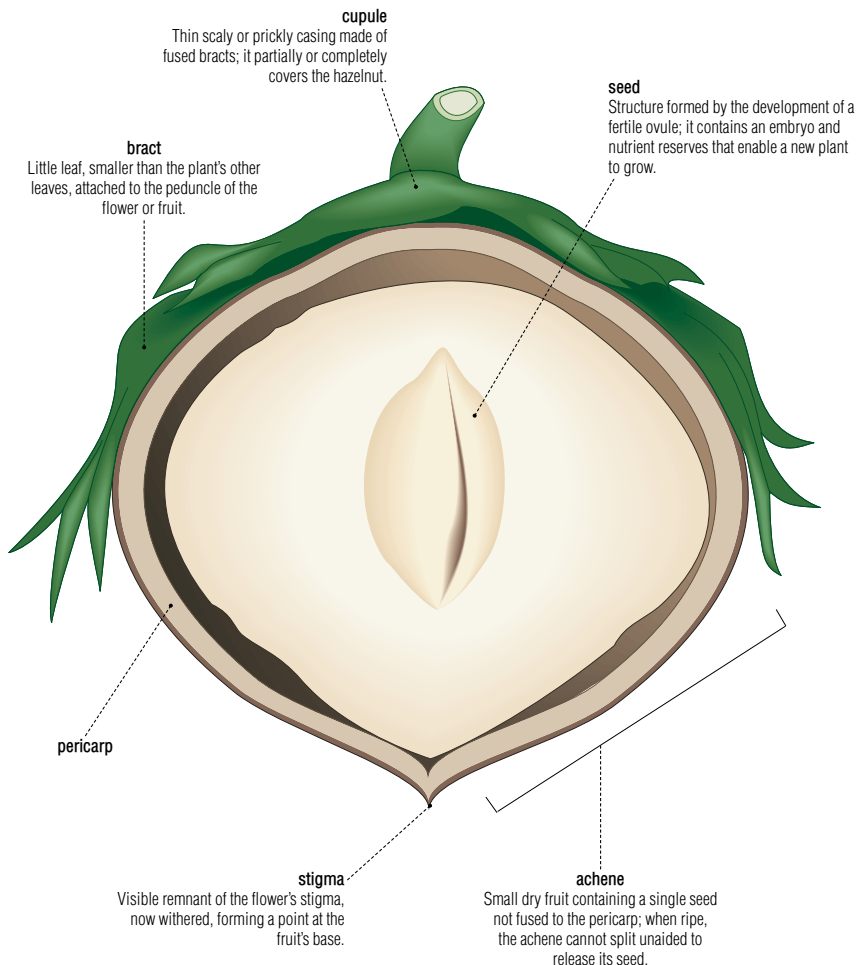
Kernel of the walnut, divided into two main sections by the partition.

partition

Membranous barrier that divides the walnut kernel into sections.

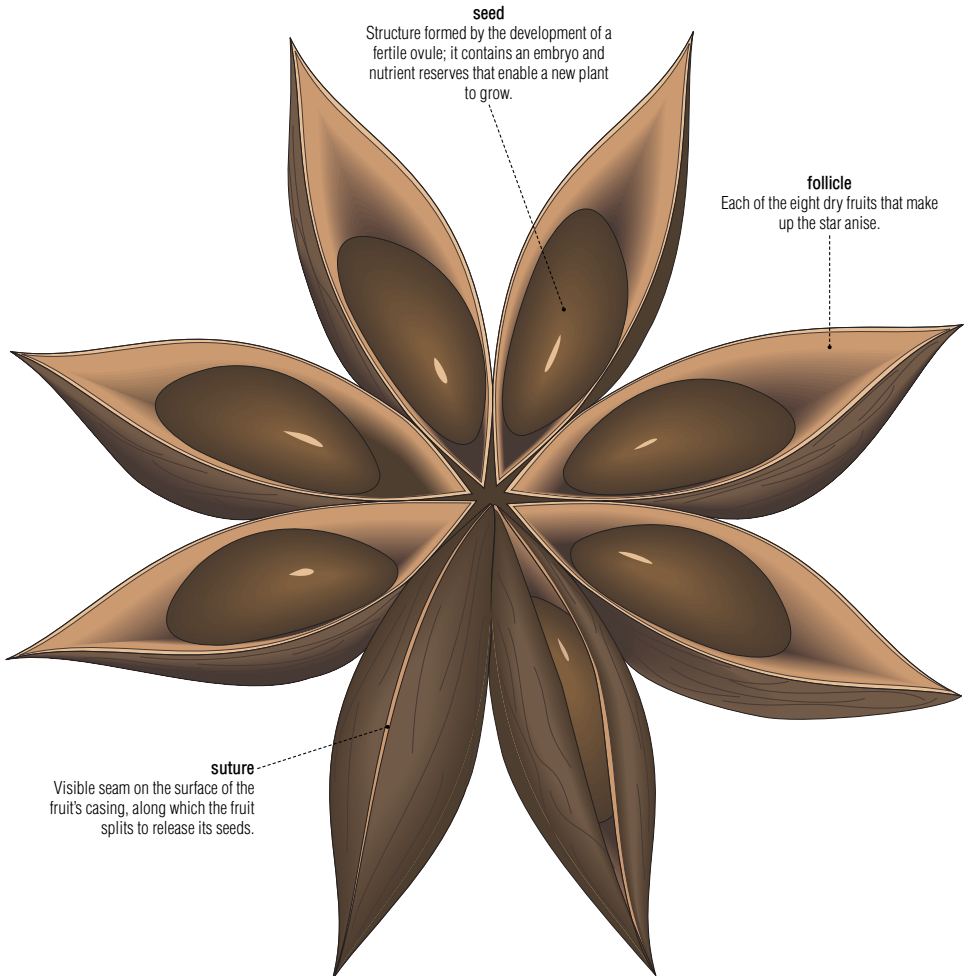
section of a hazelnut

The fruit of the hazelnut tree, the hazelnut is an achene; its pericarp is covered by a cupule.



section of a follicle: star anise

Follicle: dry single-chambered fruit that, when ripe, splits along the suture of its casing.



section of a silique: mustard

Silique: dry fruit with two valves that, when the fruit is ripe, split to release seeds.

style

Upper beak-shaped part of the fruit; it is sterile, thus contains no seeds.

seed

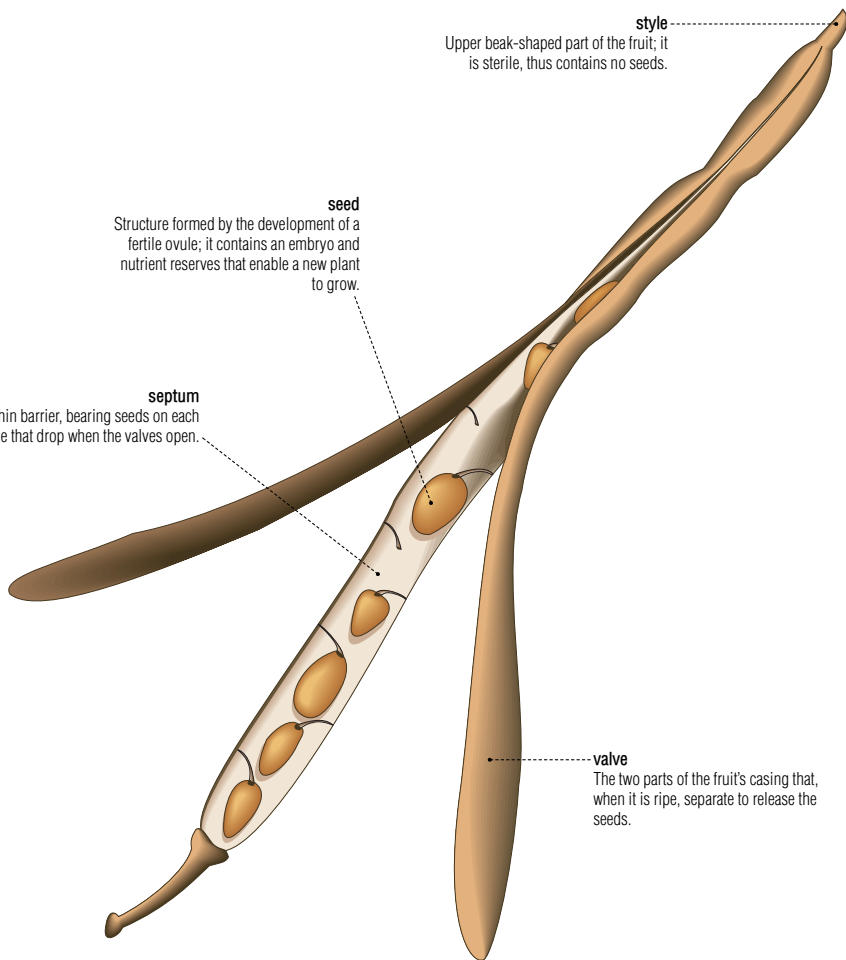
Structure formed by the development of a fertile ovule; it contains an embryo and nutrient reserves that enable a new plant to grow.

septum

Thin barrier, bearing seeds on each side that drop when the valves open.

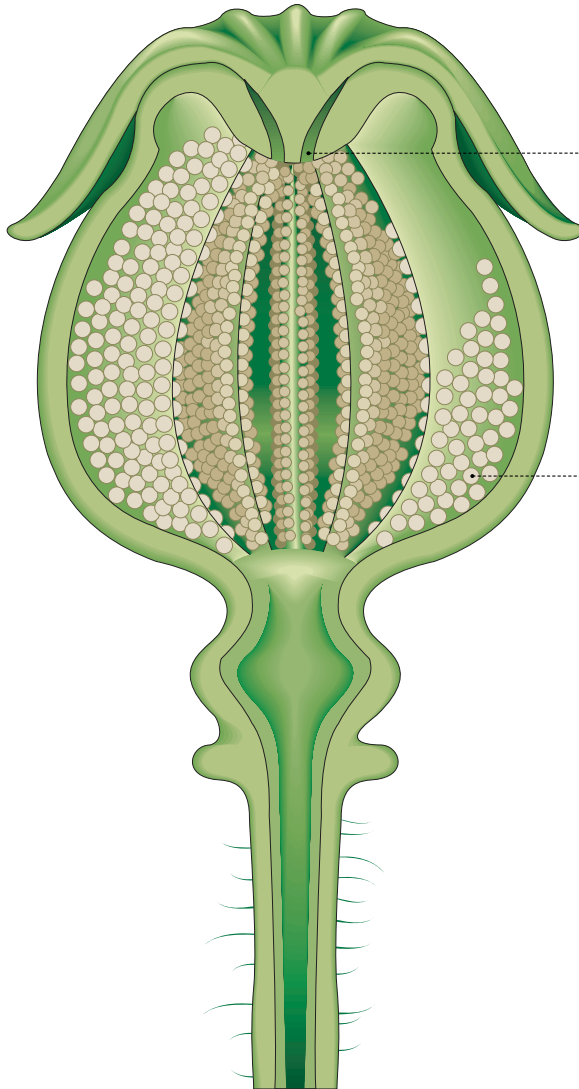
valve

The two parts of the fruit's casing that, when it is ripe, separate to release the seeds.



section of a capsule: poppy

Capsule: dry many-chambered fruit that opens laterally or at the apex when ripe; it contains a great many seeds.

**pore**

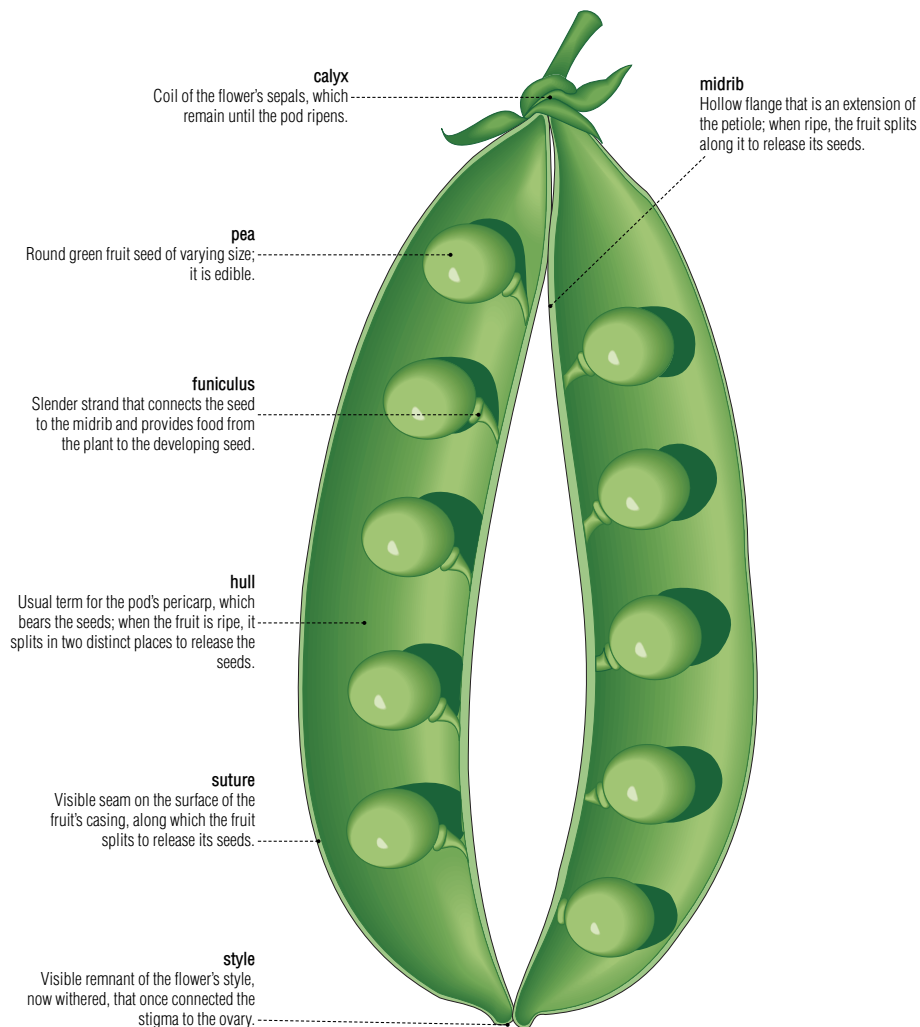
Small orifice that enables the poppy casing to split open and the seeds to disperse.

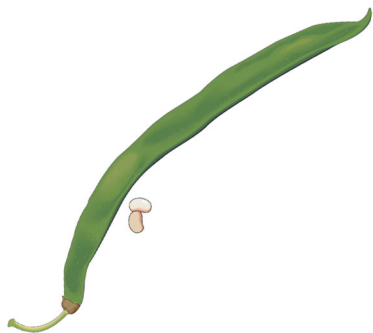
seed

Structure formed by the development of a fertile ovule; it contains an embryo and nutrient reserves that enable a new plant to grow.

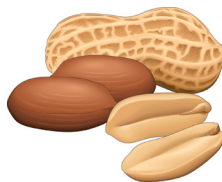
section of a legume: pea

Legume: dry single-chambered fruit that splits in two places when ripe: along the suture and along the midrib of its casing.

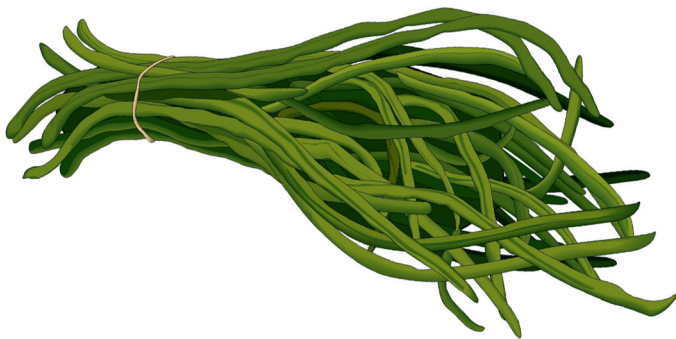


**green bean**

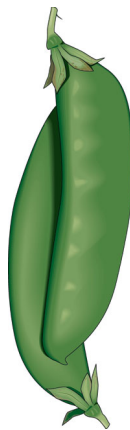
The young green pod is usually served as a vegetable side dish, sometimes with sauce or butter.

**peanut**

Often served as a snack, it is also made into a butter and a vegetable oil and, in some countries, into a spicy sauce served with a variety of dishes.

**yard-long bean**

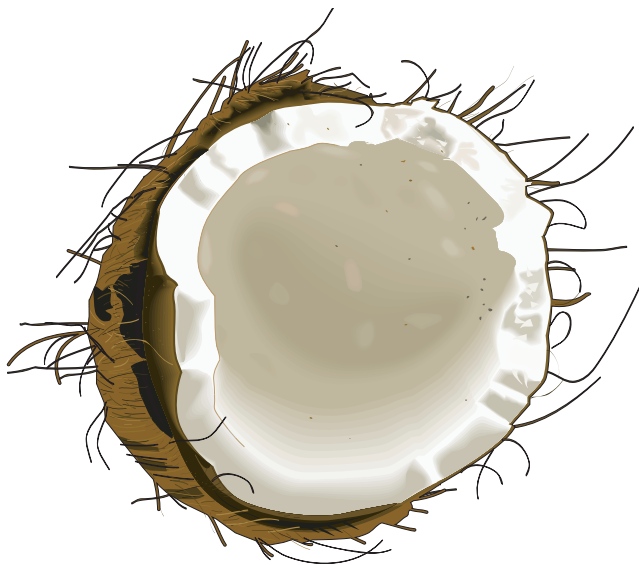
Although mostly eaten fresh and whole, like the green bean, it is less juicy and sweet; its pods measure up to 3 ft in length.

**sweet peas**

Eaten freshly picked with the sweet and crunchy pod, hence their name; they are especially popular in Chinese dishes.

**Brazil nut**

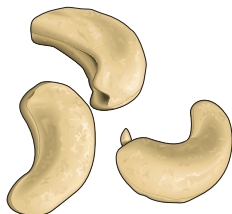
Often served as an appetizer, it is also made into candy, such as when chocolate-coated. It replaces coconut in some recipes.

**coconut**

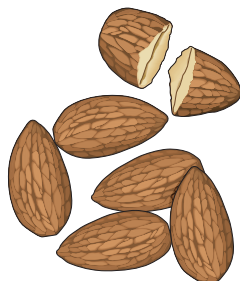
The whitish meat, known as copra, surrounds a cavity containing a refreshing liquid, not to be confused with coconut milk, which is derived from the grated flesh.

**cola nut**

Used in drink preparations such as Coca-Cola™, it contains stimulants that are slightly less potent than those in coffee.

**cashew**

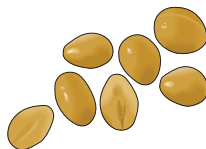
This fruit of the cashew tree is always sold shelled; its shell is covered by a juicy fleshy edible layer known as the cashew apple.

**almond**

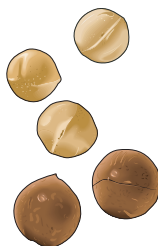
Primarily used to garnish chicken and fish, and to make almond paste, candies (nougat and pralines) and an essence that flavors Amaretto and a variety of foodstuffs.

**pistachio nut**

Its greenish kernel is covered with a brown skin; it is extensively used in Mediterranean and Asian cooking, as well as in pastry and candy making.

**ginkgo nut**

Extensively used in Japanese cooking but little known in the West, this nut is either eaten as is or is used in Asian dishes.

**macadamia nut**

A popular candy ingredient, it is often sold coated in chocolate or honey; it is also a popular ingredient in mixed vegetables, curries, salads and desserts.

**pine nut**

Edible seed inside the cone of certain species of pine that is often used in cooking and baking.

**hazelnut**

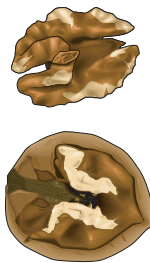
Primarily used to make paste, butter or a kind of flour used in cakes and cookies; in candy making, it is often combined with chocolate.

**pecan nut**

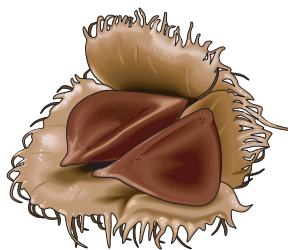
Native to North America, it is used to make certain savory dishes and numerous desserts, such as the traditional pecan pie.

**chestnut**

Designates the fruit of the chestnut tree; Europeans often serve it with game and poultry. When puréed, it is the main ingredient in the dessert known as Mont Blanc.

**walnut**

A green covering, the husk, covers the shell; the walnut is served as an appetizer, or added to a variety of desserts, salads, sauces and main dishes.

**beechnut**

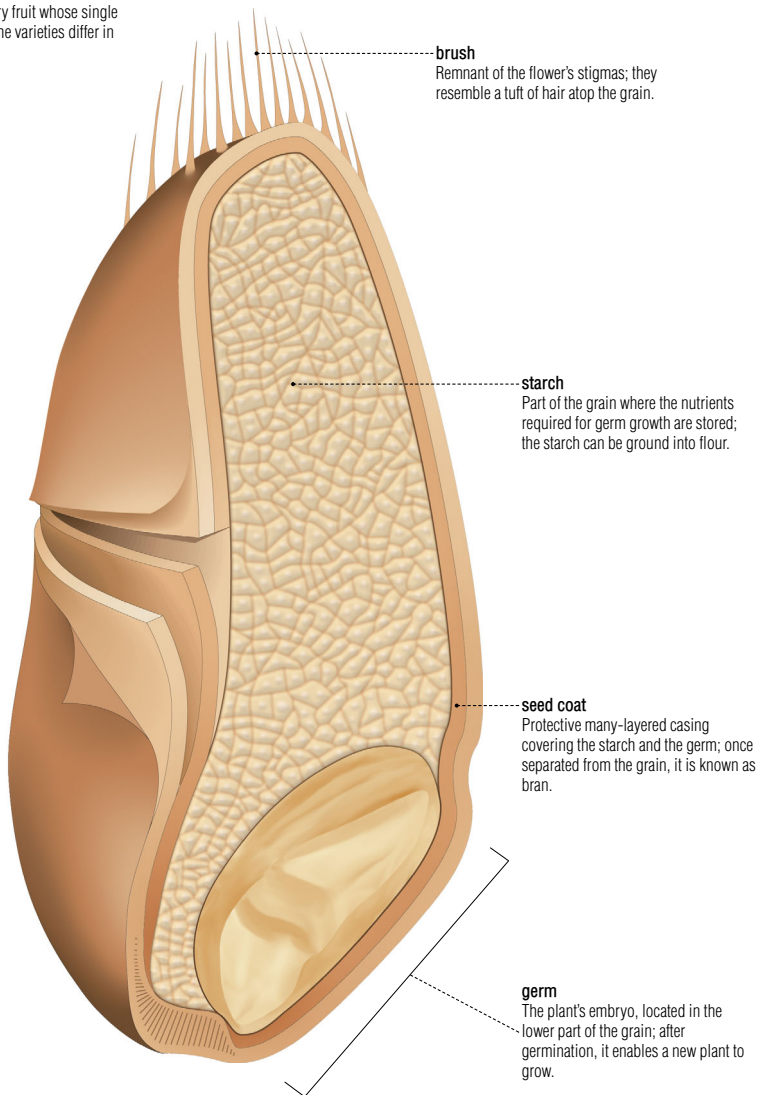
Fruit of the common beech tree, its flavor resembles the hazelnut's; more flavorful toasted than raw, it also yields a cooking oil.

cereals

Plants that are often cultivated on a large scale; their grains have been a major food staple for humans and certain domestic animals for centuries.

section of a grain of wheat

A grain of wheat is a small dry fruit whose single grain is fused to its casing; the varieties differ in size, shape and color.



**wheat: spike**

The spike is composed of a main axis bearing seeds without a pedicel; the seeds are clustered at the stem's apex.

**wheat**

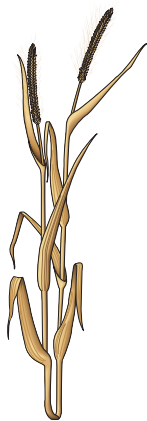
Cereal cultivated for its grain, important in producing food, especially foodstuffs such as flour, bread and semolina.

**barley: spike**

The spike is composed of a main axis bearing seeds without a pedicel; the seeds are clustered at the stem's apex.

**barley**

Cereal cultivated for its grain; it is used mainly to produce malt for brewing beer and as cattle fodder.

**rye**

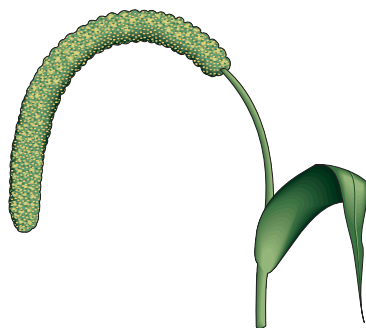
Highly resistant cereal whose grain is used mainly to feed cattle; it is used to produce flour that can be mixed with wheat flour to make bread.

**rye: spike**

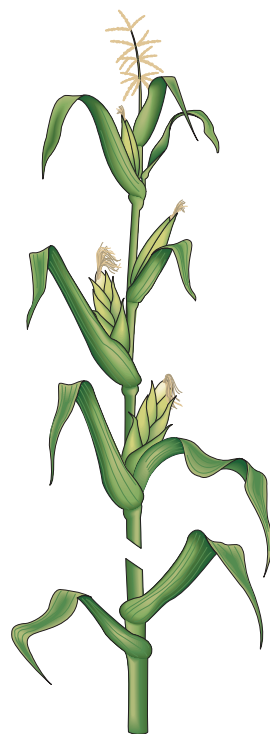
The spike is composed of a main axis bearing seeds without a pedicel; the seeds are clustered at the stem's apex.

**millet**

Cereal cultivated as fodder or for its grain; it is used mainly to make unleavened bread and to feed domesticated birds.

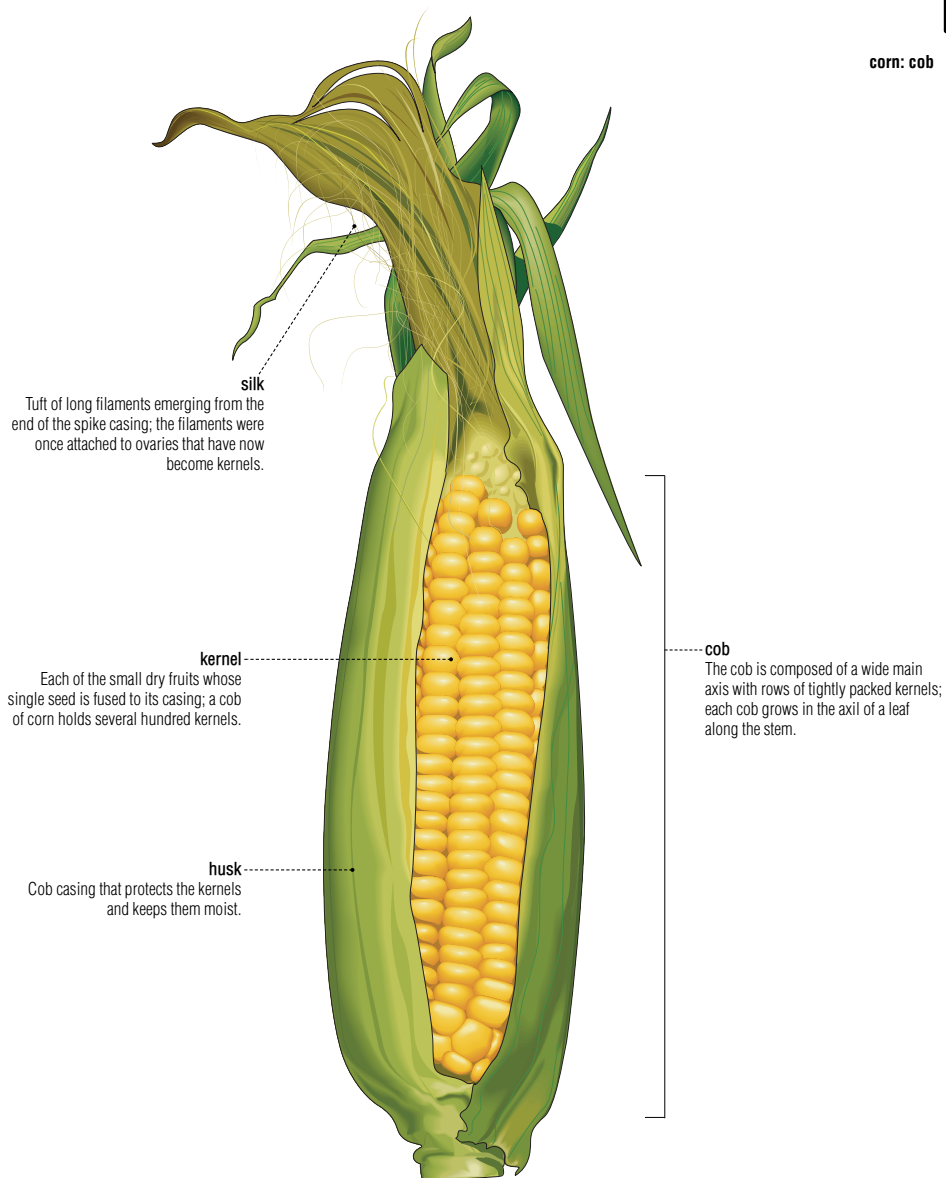
**millet: spike**

The spike is composed of a main axis bearing seeds without a pedicel; the seeds are clustered at the stem's apex.

**corn**

Native American cereal cultivated for its grains and used for human and animal food; it is also used to produce a sweet syrup and a cooking oil.

corn: cob



**oats**

Cereal cultivated for its grain; although it is mainly used to feed horses, humans also eat it, mostly in the form of flakes (rolled oats).

**oats: panicle**

The panicle is composed of a main axis with offshoots, each stem bearing grains that have a pedicel.

**buckwheat**

Cereal cultivated for its grain, mainly ground into flour; it is also used to feed cattle and some domesticated birds.

**buckwheat: raceme**

The raceme is composed of a main axis and grains that have a pedicel, clustered at the stem's apex.

**rice**

Cereal whose grain is a major food staple in many parts of the world; rice is generally grown in flooded fields.

**rice: panicle**

The panicle is composed of a main axis with offshoots, each stem bearing grains that have a pedicel.

**sorghum**

Cereal cultivated for the sugar in its sap and for its grain; it is also used as fodder, to make unleavened bread and certain kinds of beer.

**sorghum: panicle**

The panicle is composed of a main axis with offshoots; at its apex, each stem bears a cluster of grains that have a pedicel.

herbs

Aromatic fresh or dried plants used separately or mixed to bring out the flavor of recipes; they often make excellent infusions.

**dill**

Used primarily for its leaves and seeds, it imparts flavor to vinegar and pickles as well as to salmon and herring.

**anise**

Extensively used in making candy (licorice) and liqueurs (pastis), its edible leaves and seeds can flavor savory as well as sweet dishes.

**sweet bay**

The dried leaves must be used sparingly; it is an ingredient in bouquets garnis and is used to flavor soups and stews.

**mint**

Gives a refreshing taste to numerous sweet and savory dishes, such as lamb; its aromatic essential oil is used to flavor candy, liqueurs and many other types of food.

**chervil**

Has a subtle delicate taste and is used like parsley; it is often included with tarragon, parsley and chives in a traditional blend known as fines herbes.

**sage**

Its pungent flavor complements a variety of dishes; it is often used with pork, duck and goose, as well as in Italian veal dishes.

**oregano**

Wild, slightly more flavorful variety of marjoram; extensively used in Mediterranean cooking, it goes especially well with tomato dishes.

**tarragon**

Has a slightly bitter, peppery anise flavor that complements bland foods; it is often used with chicken and is always used in béarnaise sauce.

**coriander**

Its leaves are used like parsley and it has edible musk- and lemon-scented seeds; the roots can be substituted for garlic.

**parsley**

The smooth flat-leaved parsley is less bitter and more fragrant than curly-leaved parsley; it is used to flavor numerous recipes, such as tabbouleh.

**thyme**

Used with parsley and sweet bay to make bouquets garnis; because it withstands lengthy cooking, it is a popular choice for flavoring soups and stews.


savory

Reminiscent of thyme, its flavor enhances legumes, meat and stuffing; it is also used to flavor vinegar and goat's milk cheeses.


borage

Delicious in yogurt, cream cheese or salad dressing; the young leaves can be used in salads.


lovage

Resembles celery but with a stronger flavor; it is particularly tasty with potatoes and also goes well with ragouts, sauces and salads.


hyssop

The highly aromatic leaves are mostly used in salads, soups, ragouts and fruit platters, as well as in some liqueurs, such as Chartreuse and Benedictine.


rosemary

Its fairly pungent, aromatic flavor is very popular in southern France and in Italy, where it is used especially in sauces and marinades, and with roast meat.


lemon balm

Its lemon-scented leaves are used extensively in Asian cooking; it goes well with bitter foods.

Aromatic beverages derived from ground beans (coffee) or dried plants (tea, herbal tea) that are combined with boiling water.

tea

Infusion made from the dried leaves of the tea tree; drunk hot or iced, it is the world's most popular beverage after water; it is sold in bags or loose.

**green tea**

This unfermented product is very popular in China, Japan and Muslim countries; it has a more bitter taste than black tea.

**black tea**

Made from tea leaves that are fermented and then dried, it represents more than 98% of the total worldwide production of tea.

herbal teas

Infusions made with aromatic dried herbs or plants, usually considered to have calming, digestive, tonic or curative properties.

**linden**

Tree whose dried leaves and flowers can be made into herbal teas, considered to have calming, sedative and soothing properties.

**chamomile**

Herbal teas made from the flowers and leaves of this plant are considered to have digestive and calming properties.

coffee

The seeds of the coffee tree can be used to prepare an extremely popular beverage, drunk hot or cold (iced coffee), and well known for its stimulant properties.

**green coffee beans**

The green beans remain fresh for many years but the roasted beans quickly lose their flavor.

grape

Climbing plant usually cultivated for wine making or for the table.

vine stock

Base of the vine on which branches grow.

fruit branch

Secondary offshoot of a vine shoot; it first bears flowers, then fruit.

sucker

Non-fruit-bearing branch produced by plants over one year old.

trunk

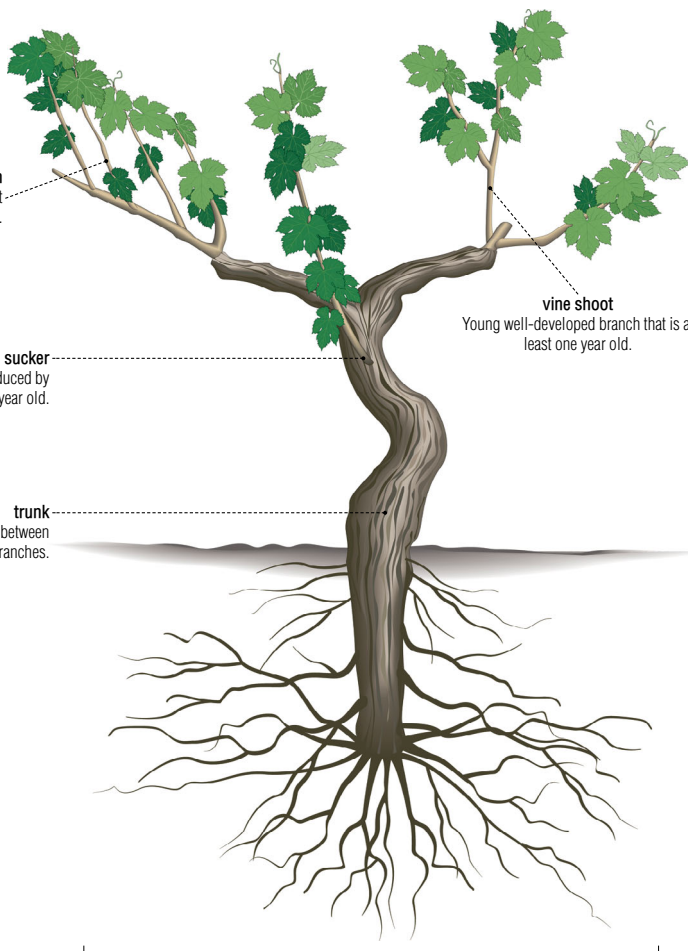
Main part of the vine located between the soil and the first branches.

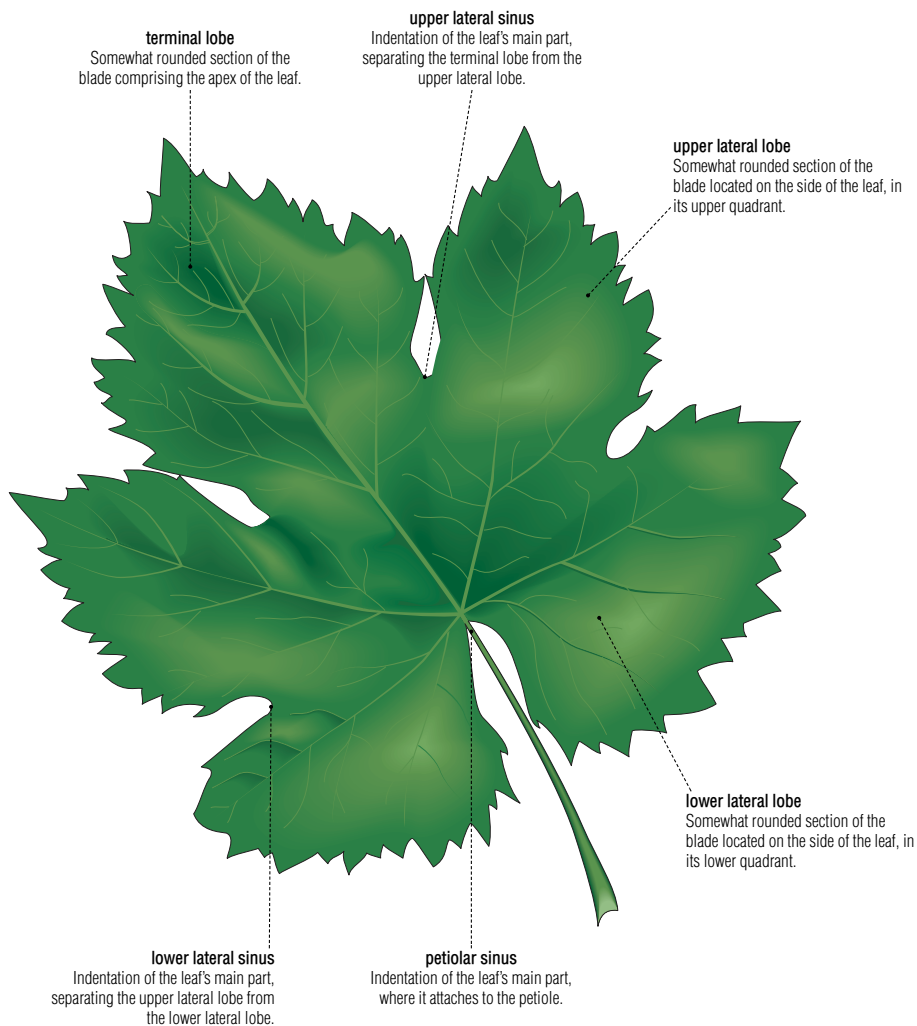
vine shoot

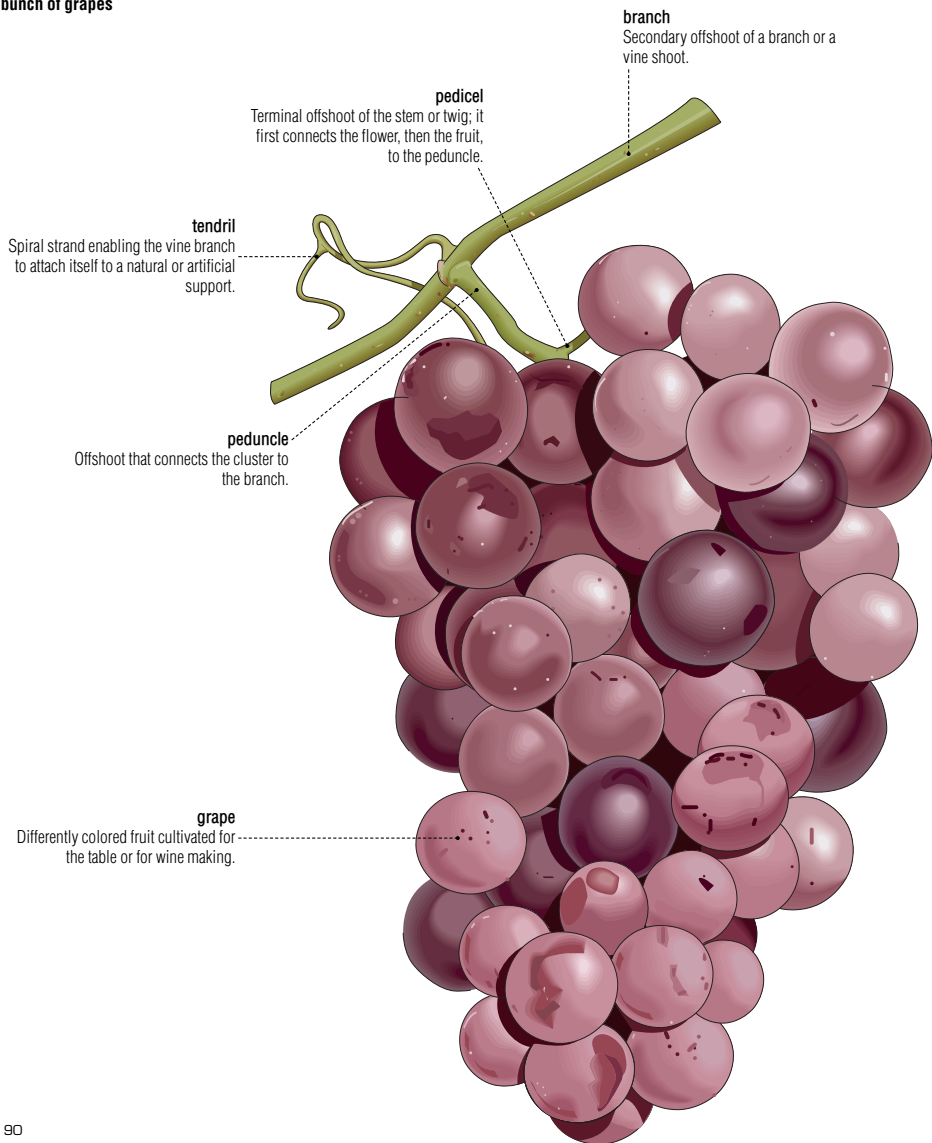
Young well-developed branch that is at least one year old.

root system

The aggregate of the roots that anchor a plant to the soil and enable it to absorb water and mineral salts from it.

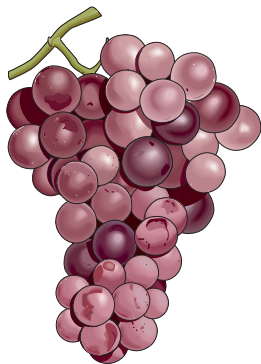




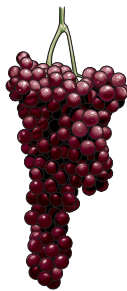
bunch of grapes

examples of grapes

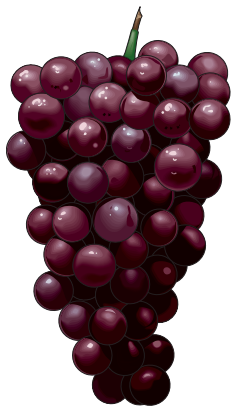
There are many varieties of grapes, with colors ranging from green to red and blackish-blue.

**Muscat grapes**

Red grapes with a fine skin and a slightly musky taste.

**Corinth grapes**

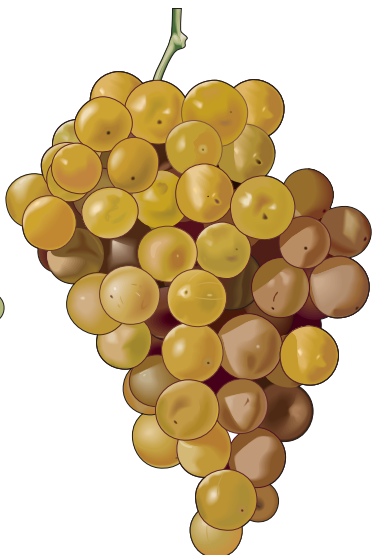
Small, very sweet black grapes, often dried to make raisins.

**Cardinal grapes**

Large red grapes with a very firm flesh.

**Thompson grapes**

Large green seedless grapes, most of which are grown in North America.

**Chasselas grapes**

Very juicy green grapes cultivated mainly for eating.

grape

maturing steps

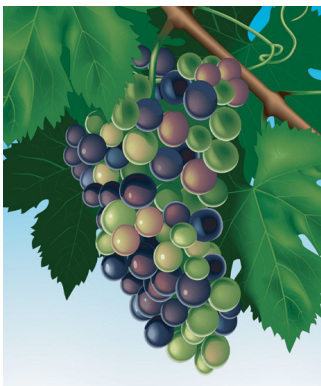
The harvest occurs about 100 days after flowering, after the grape has gone through four successive maturing steps.

**flowering**

First step in the maturing process, when flowers appear.

**fruition**

Second step in the maturing process, when the grape berries are formed.

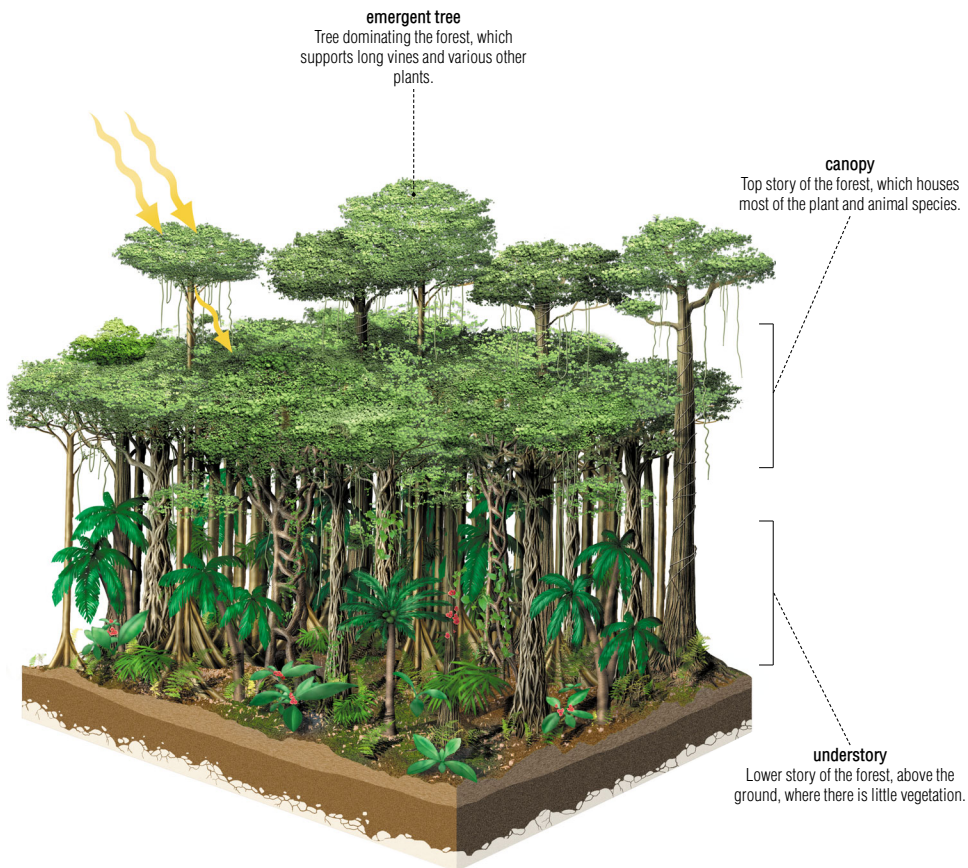
**ripening**

Third step in the maturing process, when the grapes darken and become translucent.

**ripeness**

Last step in the maturing process, when the grapes are ripe and ready to be picked.

Dense, humid forest of tropical climates, containing very high biodiversity.

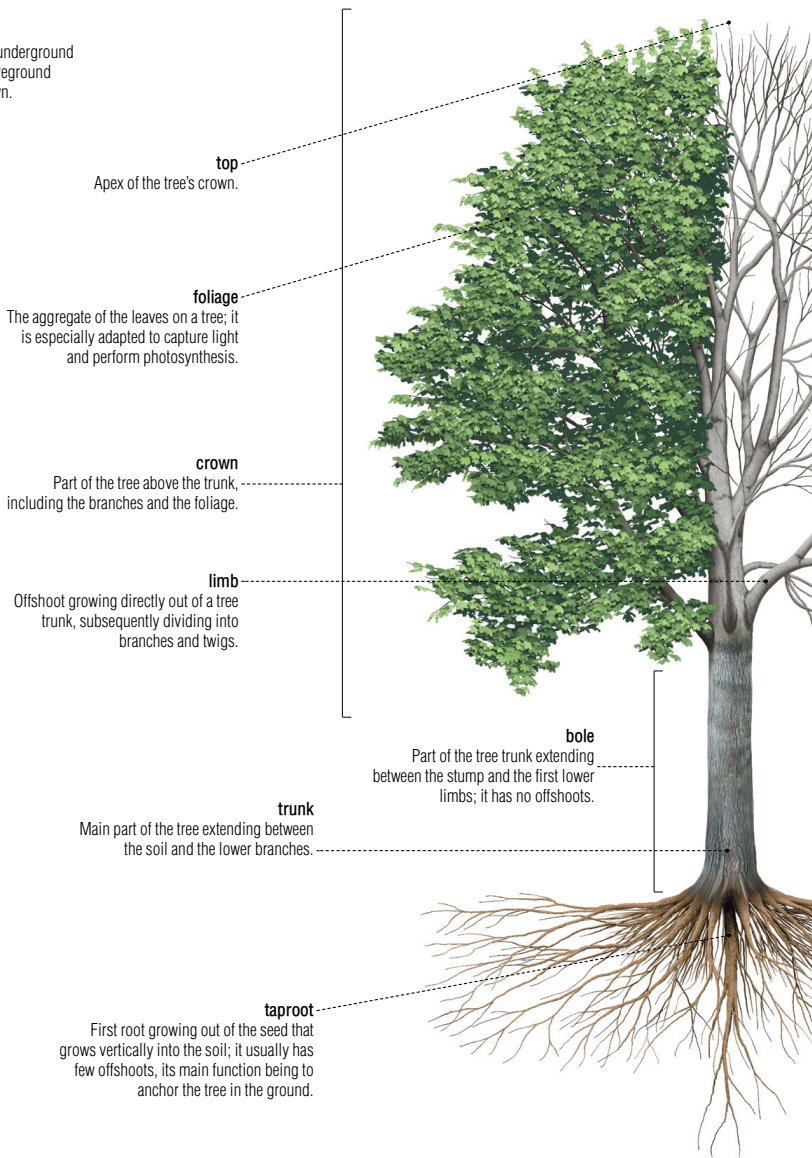


tree

Large vegetable whose root system and aboveground part are well developed; it produces oxygen and provides wood.

structure of a tree

The tree is composed of an underground part, the roots, and two aboveground parts, the trunk and the crown.



branches

The aggregate of larger and smaller branches that provide support for the tree's leaves, flowers and fruit.

branch

Offshoot of one of the tree's limbs.

twig

The most slender offshoot of a tree branch.

stump

Lower part of the trunk that remains in place, with its roots, when the tree is cut down.

shoot

Young shoot that sprouts out of the tree stump.

shallow root

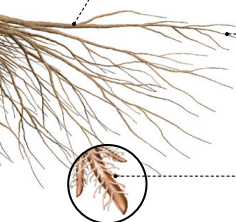
Root, often having many offshoots, growing somewhat horizontally into the rich moist topsoil.

radicle

The most slender offshoot of a tree root.

root-hair zone

Part of the radicle covered in small absorbent hairs that ensure the tree is supplied with mineral salts and water.



cross section of a trunk

Moving from the center to the periphery there are six parts: the pith, the heartwood, the sapwood, the cambium, the phloem and the bark.

annual ring

Each of the concentric circles representing the layer of wood produced in one year; the age of the tree can be determined by the number of rings.

wood ray

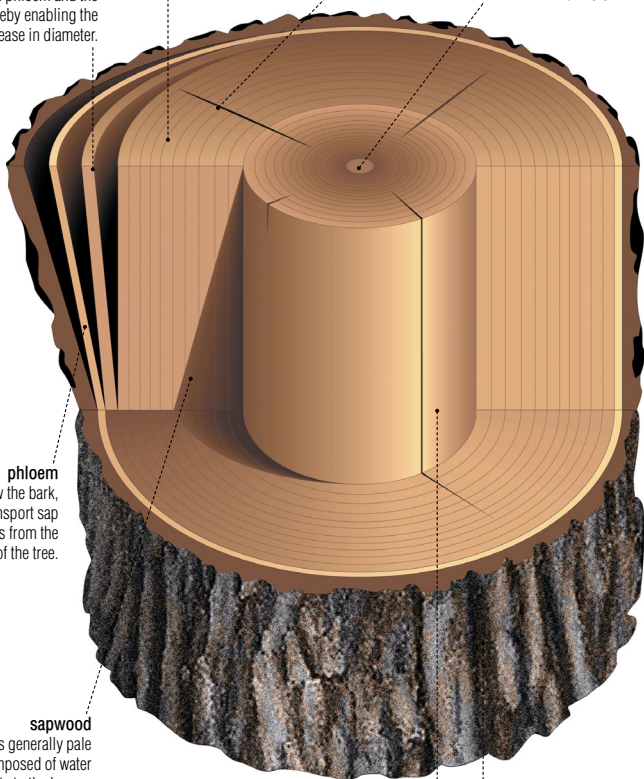
Conduit connecting the pith to the core and circulating nutrients horizontally within the trunk.

cambium

Growth tissue that simultaneously produces the external phloem and the internal sapwood, thereby enabling the tree to increase in diameter.

pith

Central part of the trunk, composed of soft tissue that contains nutrients essential for sapling growth.

**phloem**

Tissue located immediately below the bark, whose main function is to transport sap transformed by photosynthesis from the leaves throughout the rest of the tree.

sapwood

Relatively new layer of wood that is generally pale in color; it transports raw sap, composed of water and nutrient minerals, from the roots to the leaves.

heartwood

Hard dark-colored wood layer made of dead sapwood; it encircles the pith and supports the trunk and branches.

bark

Tree's external protective layer; its texture and color vary depending on the species.

shape of a tree

General silhouette of a tree, which varies according to the species and the growth conditions.

**oval shape**

Habit characterized by many well-developed small branches.

**weeping shape**

Habit in which branches begin to grow upward, then droop downward.

**pyramidal shape**

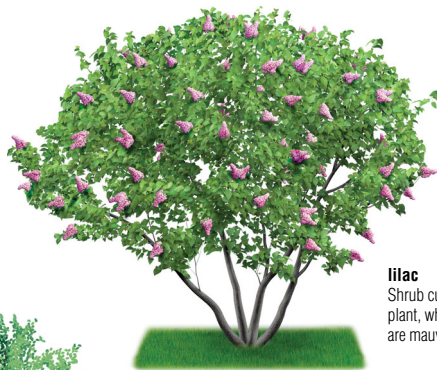
Habit that is pyramid shaped, characteristic of many conifers.

**columnar shape**

Habit that is almost cylindrical in shape characterized by short, thin branches.

examples of broadleaved trees

Broadleaved trees have mainly large flat leaves; in temperate zones, these usually fall as winter approaches.

**lilac**

Shrub cultivated as an ornamental plant, whose highly scented flowers are mauve, white, or pink.

**birch**

Tree whose most common species has smooth white bark covered in black markings; the bark readily peels off the trunk in large sections.

**oak**

Large tree with deeply indented leaves, bearing acorns as fruit; it is prized for its hard and extremely resistant wood.

**beech**

Smooth-barked tree, prized for its ornamental value and its wood; it is used especially in woodworking and for heating.

**weeping willow**

Tree with long flexible hanging branches; it is often used for ornamental purposes and generally grows near water.

**palm tree**

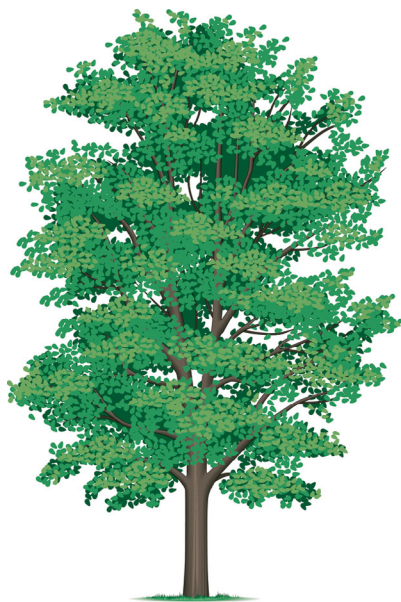
Tree native to tropical regions; among its various species are date- and coconut-bearing kinds.

**poplar**

Tall slender fast-growing tree; its soft wood is used especially in woodworking and to make pulp for papermaking.

**walnut**

Large tree that produces an edible fruit, the walnut; its hard compact wood is prized especially by carpenters for its use in making furniture.

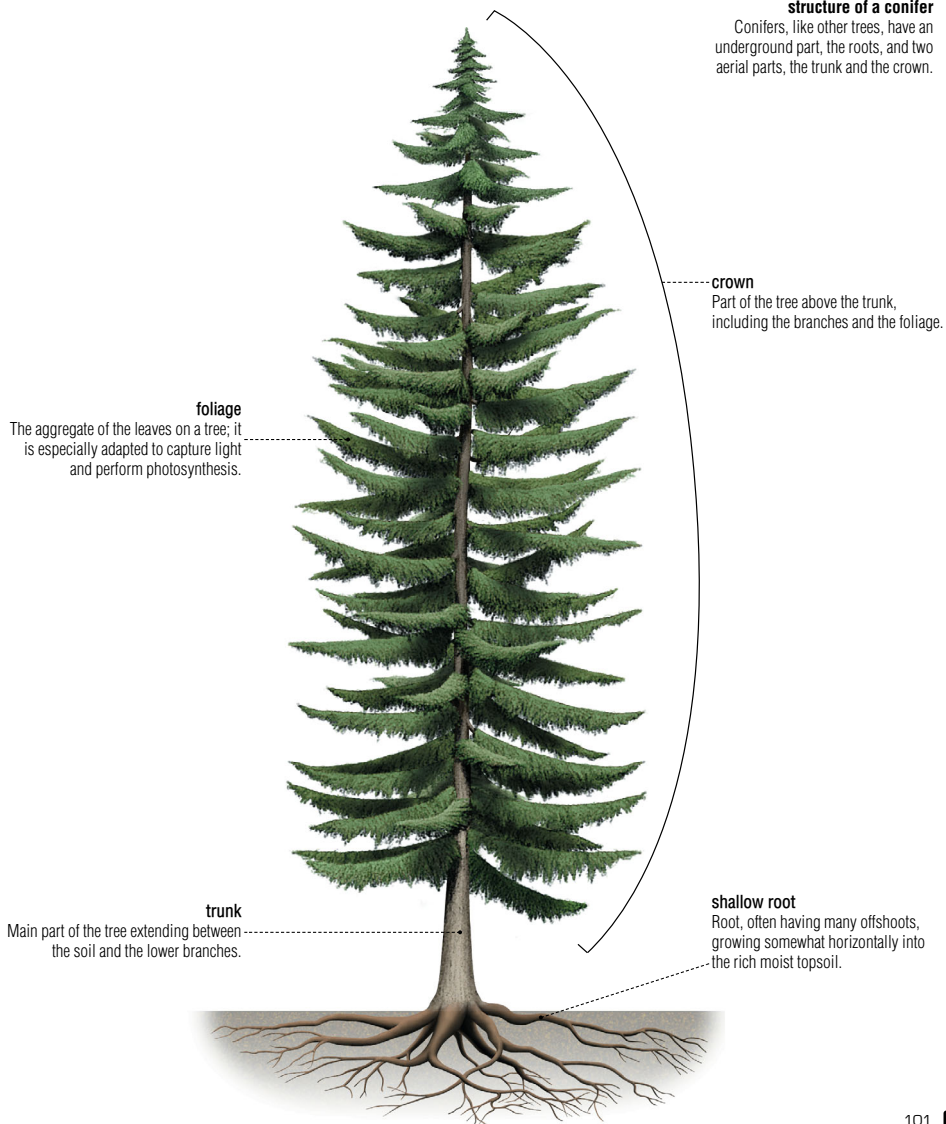
**maple**

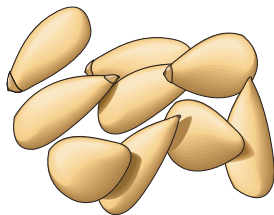
Tree producing the samara, a small dry winged fruit; its wood is prized by cabinetmakers. The sugar maple tree's sap can be made into a syrup.

Tree that usually retains its needle- or scalelike leaves all winter long; it bears cones, hence its name, and produces a sticky sap known as resin.

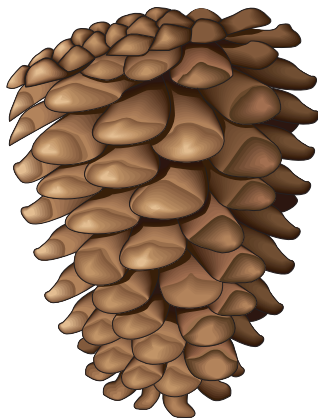
structure of a conifer

Conifers, like other trees, have an underground part, the roots, and two aerial parts, the trunk and the crown.



**pine seed**

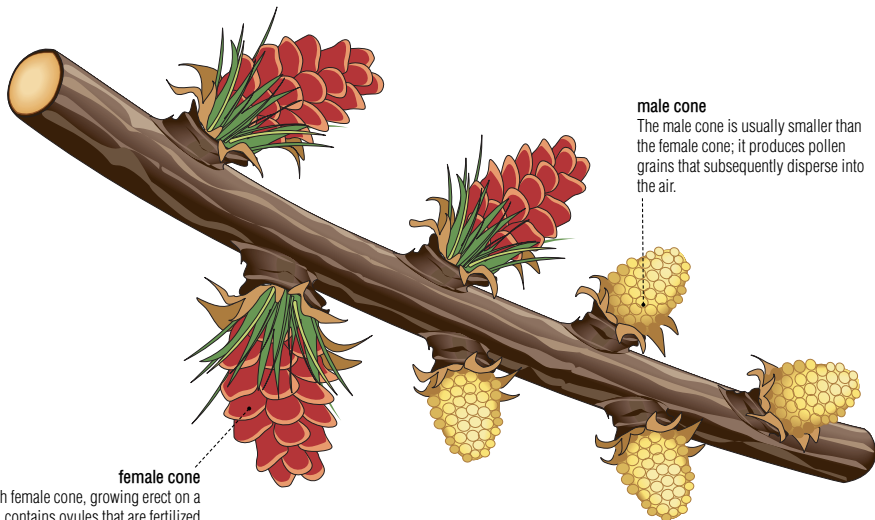
Edible seed inside the cone of certain species of pine that is often used in cooking and baking.

**cone**

Fruit borne by conifers, consisting of scales arranged in a conical shape; when the cone is ripe, seeds develop under it.

branch

Offshoot of a tree branch along which cones develop.

**female cone**

Each female cone, growing erect on a branch, contains ovules that are fertilized by pollen grains; the ovules subsequently turn into seeds.

male cone

The male cone is usually smaller than the female cone; it produces pollen grains that subsequently disperse into the air.

examples of leaves

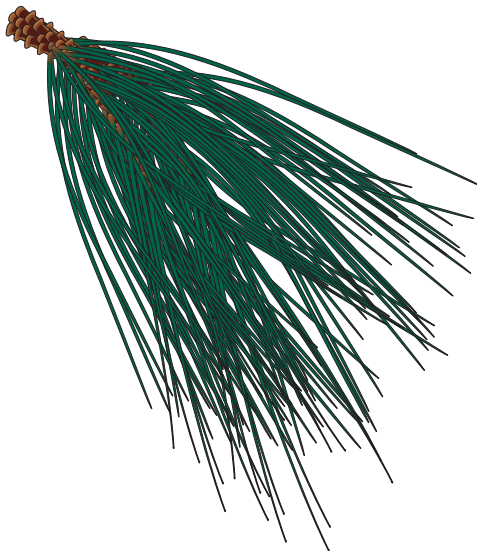
Conifer leaves consist of scales or needles, varying in length and width.

cypress scalelike leaves

The cypress has scales or small short stiff leaves whose blades grow directly out of the twig.

**pine needles**

Pine leaves consist of long slender pointed needles; they grow in groups of two, three or five out of the branch.

**fir needles**

Fir leaves consist of short hard flattened needles; each needle grows directly out of the branch.



examples of conifers

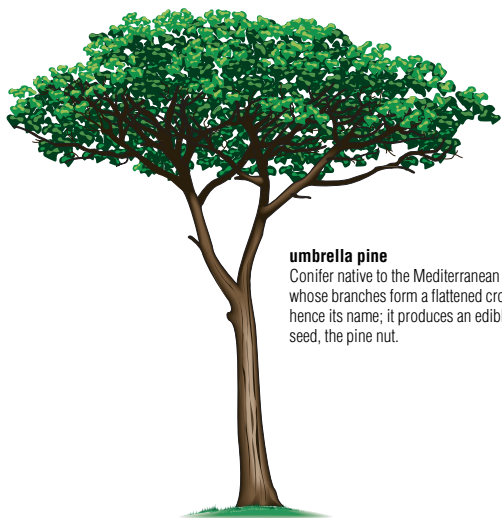
There are 550 conifer species; because they are well adapted to harsh climates, they often form the tree line on mountains and in subpolar regions.

larch

One of the few conifers that sheds its needles in the fall; its scented, resistant wood is used in construction and carpentry.

**umbrella pine**

Conifer native to the Mediterranean area whose branches form a flattened crown, hence its name; it produces an edible seed, the pine nut.

**cedar of Lebanon**

Conifer of Middle Eastern origin with a large, flattened top; now rare, former civilizations made abundant use of its wood.



**spruce**

Conifer with small cylindrical needles encircling the branch; it has reddish-brown bark and can grow to 180 ft.

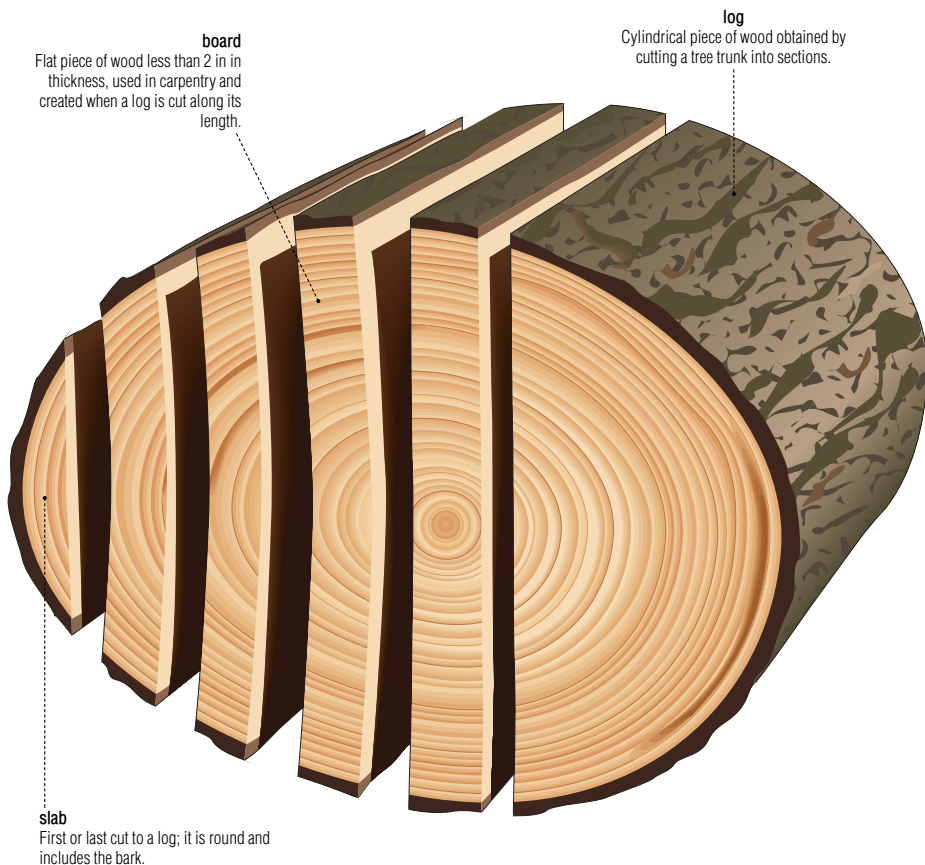
**fir**

Scented conifer with flat needles arranged on each side of the branch; it has grayish bark, flecked with resin. Fir is commonly used as a Christmas tree.

wood

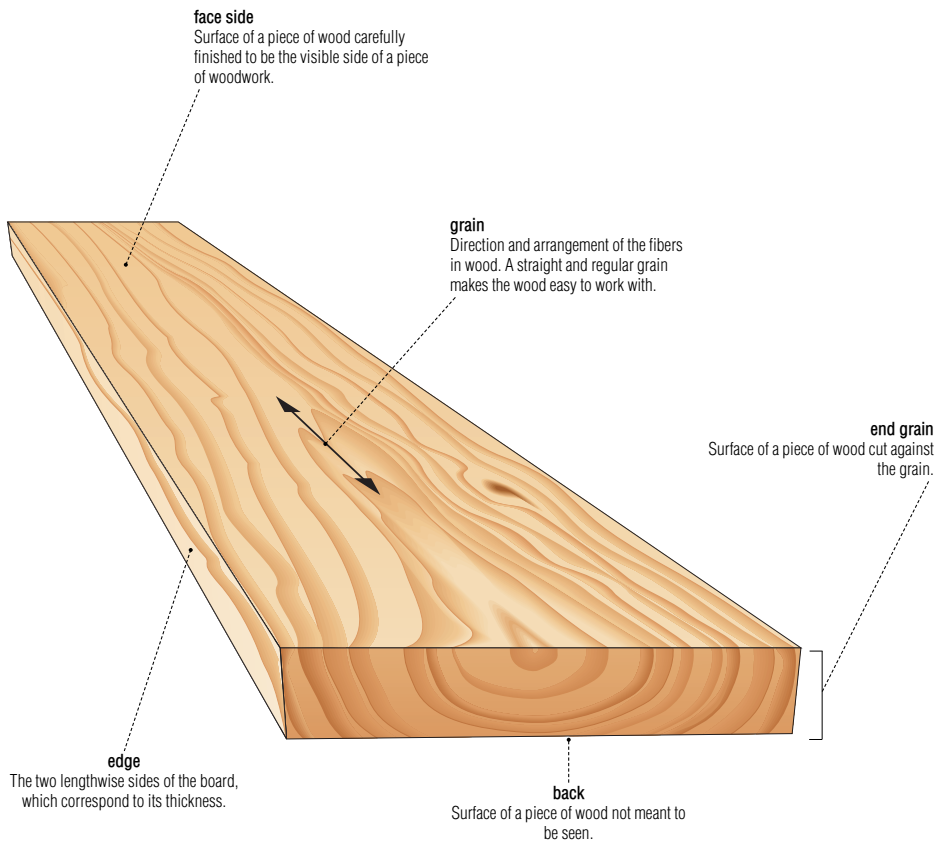
Relatively hard, dense substance forming the trunks, branches and roots of trees. The wood of each species has distinct characteristics.

section of a log



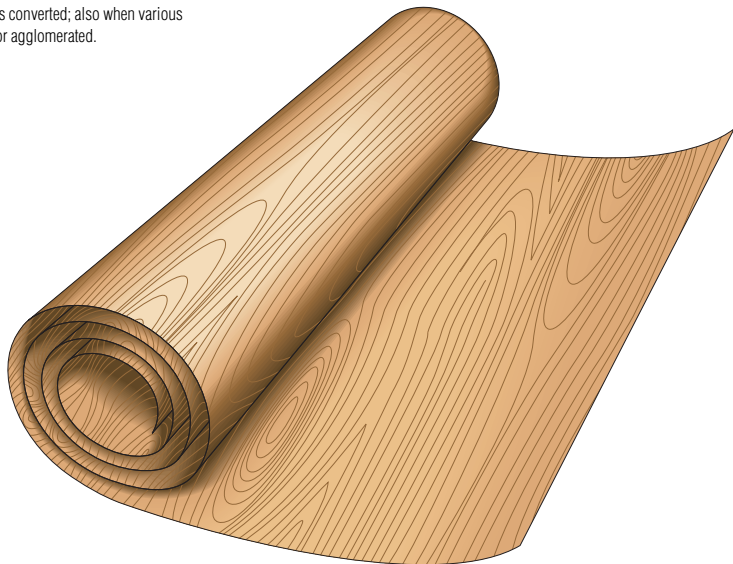
board

Flat piece of wood less than 2 in in thickness, used in carpentry and created when a log is cut along its length.

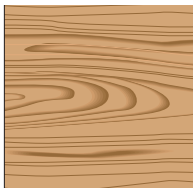


wood-based materials

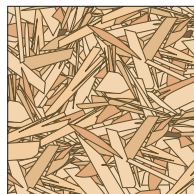
Materials obtained when a log is converted; also when various wood elements are assembled or agglomerated.

**peeled veneer**

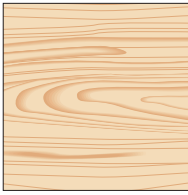
Thin sheet obtained from rotating a log on a peeling machine and applying a blade (lathe) to it.

**laminboard**

Panel made of two layers sandwiching a central part (core), which is made up of wide slats, or laminations, glued side by side.

**waferboard**

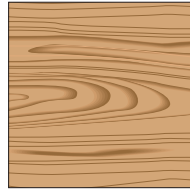
Panel made from wood chips mixed with glue, then pressed at a high temperature to bond them.

**ply**

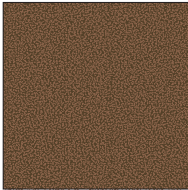
Thin sheets of wood (veneer) of equal thickness, used for the manufacture of plywood.

**multi-ply plywood**

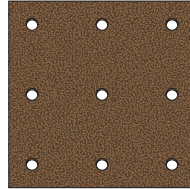
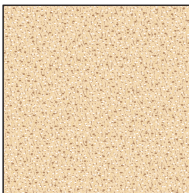
Panel made from at least five layers, each glued to the other with their respective grains running perpendicular to the adjacent layer.

**blockboard**

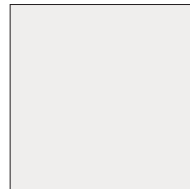
Panel made of two layers sandwiching a central part (core), which is made up of wide slats glued side by side.

**hardboard**

Smooth and homogeneous board made when minuscule wood fibers are soaked in resin and pressed at a high temperature.

**perforated hardboard****particle board**

Board made from sawdust mixed with glue, then pressed at a high temperature to bond them.

**plastic-laminated particle board**

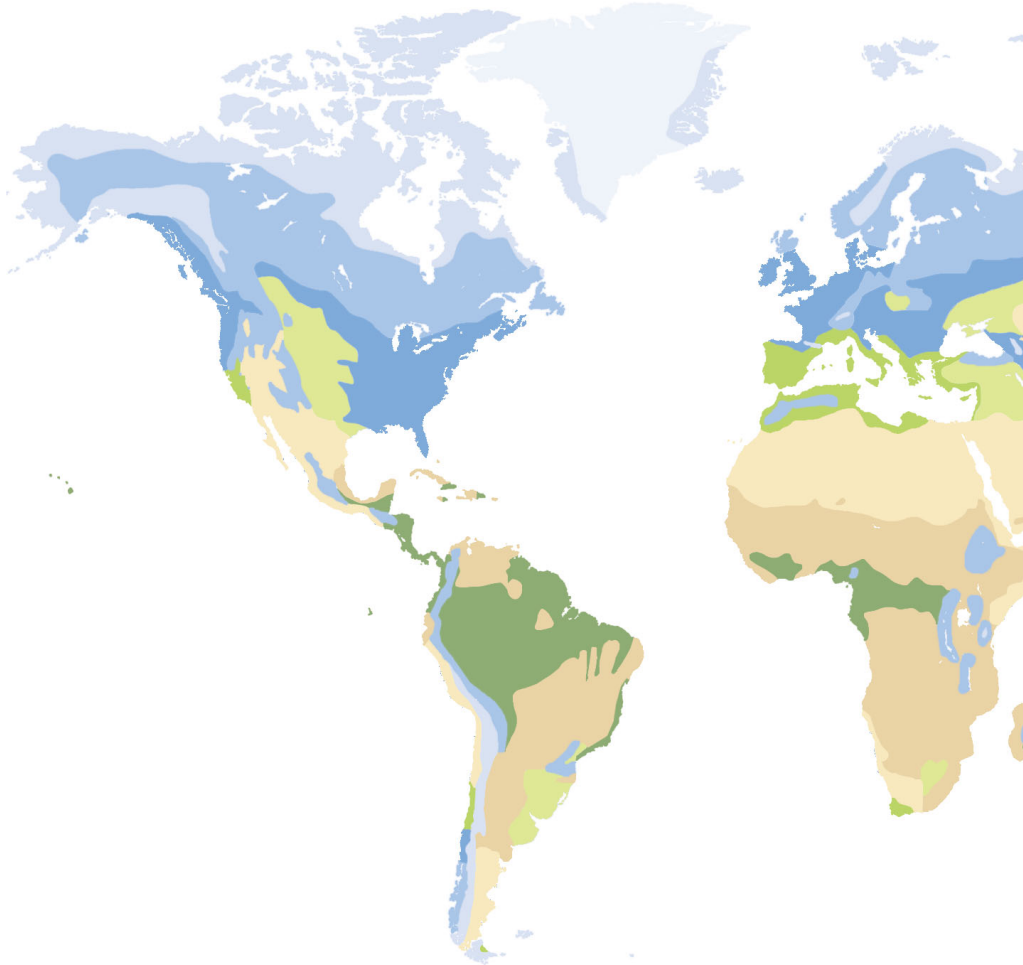
Particle board with a melamine surface layer that is hard, smooth and easy to wash.

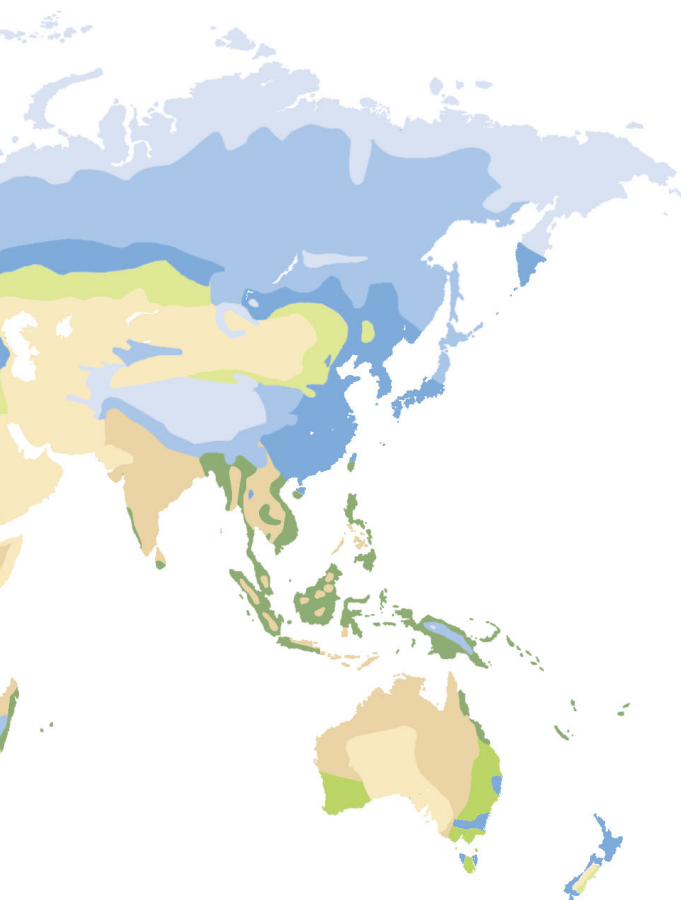


vegetation and biosphere

vegetation regions

Vegetation plays an essential role in maintaining biospheric equilibrium; it varies depending on climate and soil characteristics.



**desert**

Hot region where aridity (less than 4 in of annual rainfall) is such that plant and animal life is almost nonexistent.

maquis

Vast expanse of degenerated vegetation composed of shrubs with evergreen leaves; it is adapted to summer drought.

tropical rain forest

Dense forest whose biodiversity is among the richest; its growth is fostered by abundant and regular precipitation.

savanna

Vast expanse of herbaceous plants, dominated by tall grasses and shrubs; it is typical of hot regions that have a rainy season.

temperate forest

Forest composed mainly of deciduous trees, including oak, ash and beech.

grassland

Vast expanse of herbaceous plants, mostly grasses; virtually devoid of trees, these regions are characterized by relatively cold, dry winters.

tundra

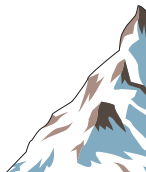
Plant formation that grows in relatively arid regions; it includes mosses, lichens, grasses, bushes and dwarf trees.

boreal forest

Vast expanse of forest composed mainly of conifers, although certain deciduous trees also grow here.

elevation zones and vegetation

Types of vegetation vary depending on temperature and rainfall, which in turn depend on altitude.

**glacier**

Mass of ice resulting from the accumulation and compression of snow; it moves under its own weight.

**tundra**

Plant formation that grows in relatively arid regions; it includes mosses, lichens, grasses, bushes and dwarf trees.

**coniferous forest**

Forest composed mainly of softwood trees with evergreen leaves in the form of needles or scales.

**mixed forest**

Forest composed of conifers and deciduous trees.

**deciduous forest**

Forest composed mainly of trees with broad leaves that grow back every year.

**tropical forest**

Dense, highly varied forest in the intertropical zone, where precipitation is abundant and regular.

structure of the biosphere

Biosphere: the part of the Earth's covering where life is possible; it extends from the floor of the oceans to the summit of the highest mountains (about 12 mi).

atmosphere

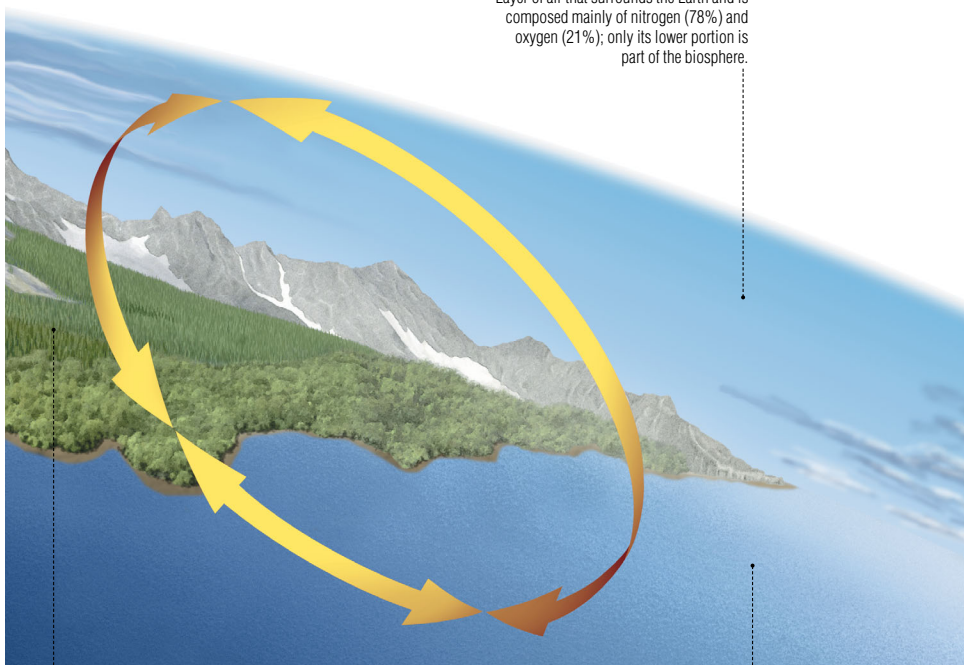
Layer of air that surrounds the Earth and is composed mainly of nitrogen (78%) and oxygen (21%); only its lower portion is part of the biosphere.

hydrosphere

A collective term for the planet's waters, including the oceans, seas, lakes, watercourses and underground water systems.

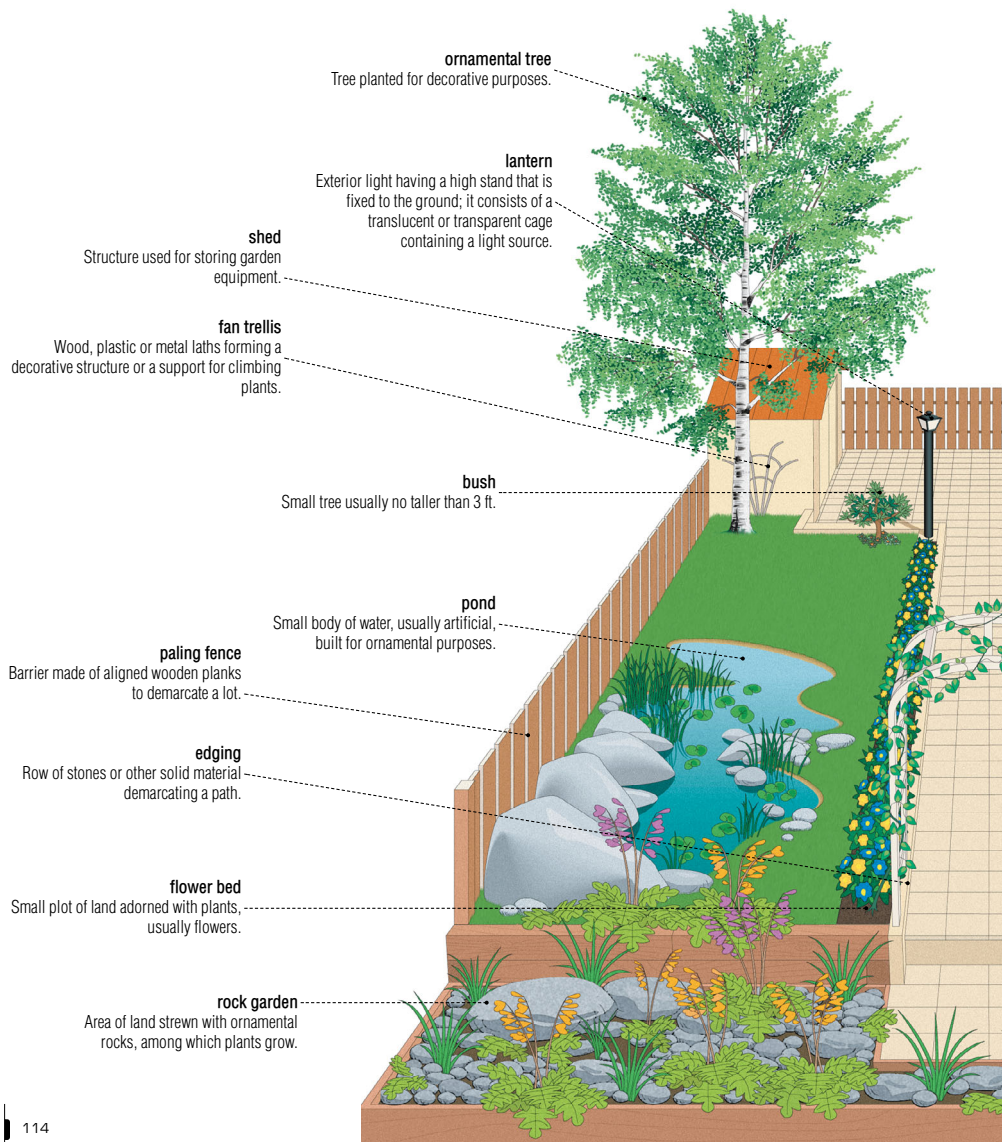
lithosphere

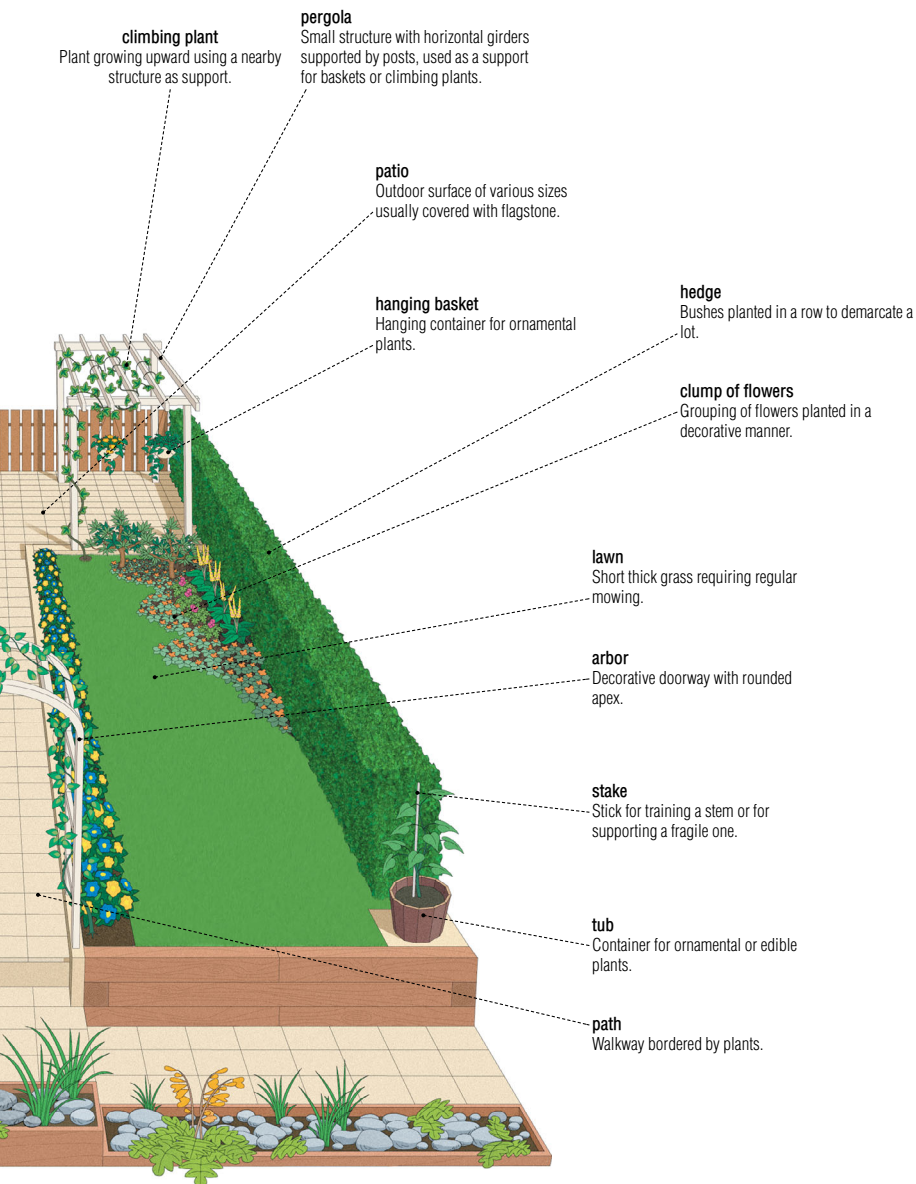
Outer layer of the Earth's crust; only its upper portion, to a depth of 1 mi, is part of the biosphere.



pleasure garden

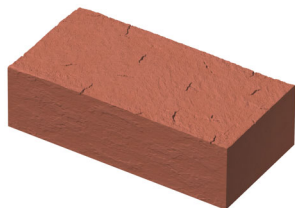
Private plot reserved for cultivating ornamental plants where one strolls and relaxes.





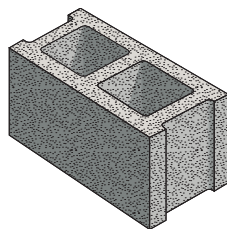
basic building materials

Components that, when assembled, form the structure of a building.



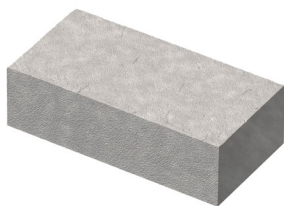
solid brick

Small brick, not perforated, used especially in building or covering various types of walls.



concrete block

Concrete component, solid or hollow, used mainly in the construction of masonry as a substitute for brick.



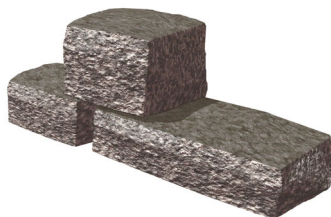
firebrick

Brick that can withstand very high temperatures without deforming.



flagstone

Flat stone of irregular shape, used to cover floors and walls.



rubble

Small block of rough or crudely carved stone, usually assembled with the help of mortar to build a wall.



mortar

Mixture of fine aggregates (pebbles, gravel, sand), water and a binder (cement or lime), used to join masonry components or to coat masonry after it is completed.

Instruments used for working the soil in cramped spaces, such as a flower bed, small clumps, containers and baskets.

**hand fork**

Tool equipped with straight, somewhat flat tines, used mainly for loosening the soil.

gardening gloves
Article of clothing covering the hands to protect them when gardening.

**trowel**

Small shovel used for digging a hole for planting or for removing a seedling.

**small hand cultivator**

Tool with tines curved at right angles, usually used for loosening, aerating and weeding the soil.

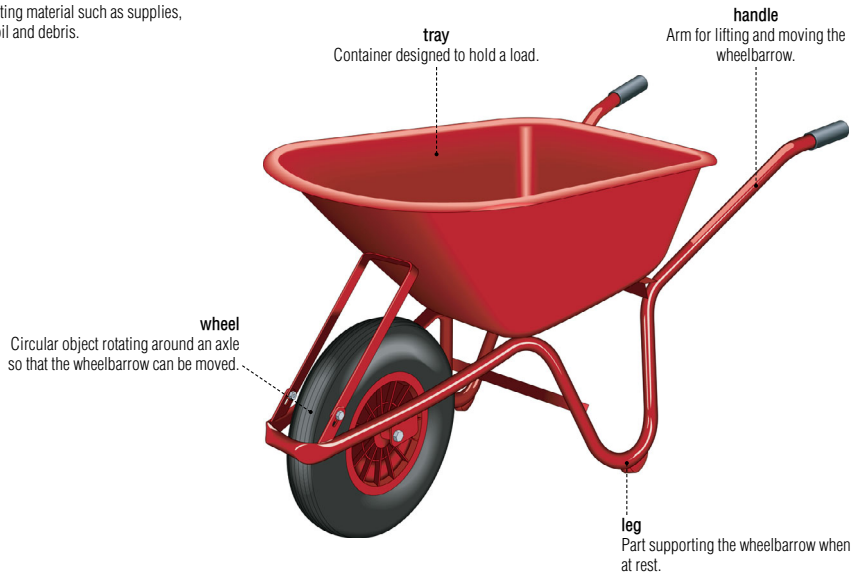
**weeder**

Tool with a narrow blade for pulling up weeds with deep roots.

miscellaneous equipment

wheelbarrow

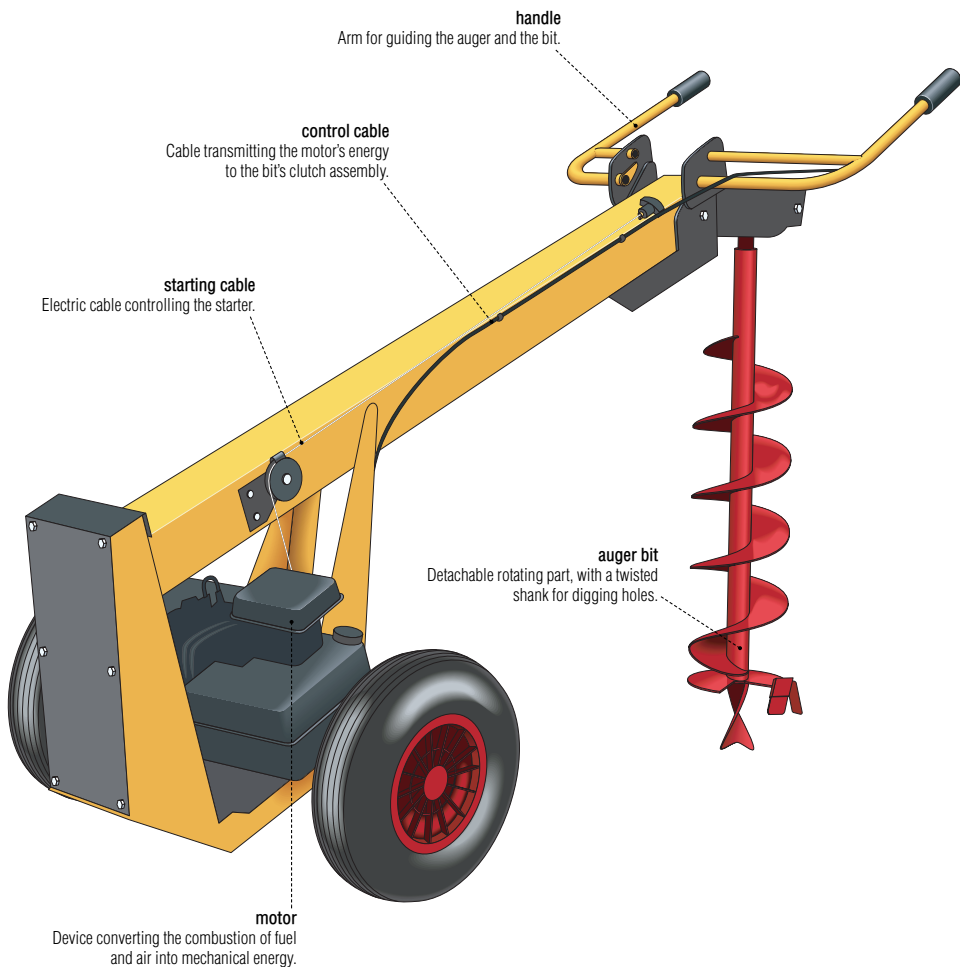
Small one-wheeled handcart for transporting material such as supplies, tools, soil and debris.

**compost bin**

Container for decomposing organic waste from the garden and kitchen to produce fertilizer (compost).

motorized earth auger

Machine using a rotating bit to quickly dig holes of various sizes in the ground.



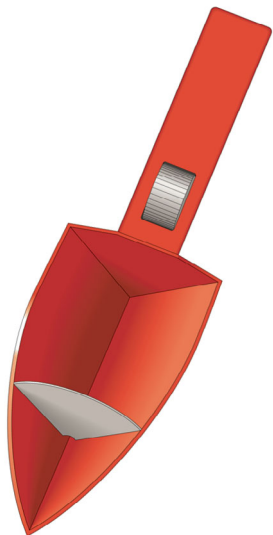
seeding and planting tools

**garden line**

Cord stretched between two stakes and used as a guide for marking straight furrows and edges for a border or a hedge, or for demarcating sections of a vegetable garden.

**dibble**

Pointed tool for digging a small hole in the ground in which to plant seeds or bulbs.

**seeder**

Small shovel fitted with a distribution device for sowing seeds without touching them.

**bulb dibble**

Tool with a cylindrical container for removing a core of soil to create a hole in which plant bulbs or young plants are planted.

**spreader**

Small handcart with a reservoir and distribution mechanism for evenly spreading seeds or fertilizer on an area.

**stake**

Stick for training a stem or for supporting a fragile one.

wheel

Circular instrument rotating around an axle so that the device can be moved.

tools for loosening the earth

**lawn edger**

Tool with a semicircular blade for trimming the edge of the lawn, usually along a driveway, a patio or flower bed.

**spading fork**

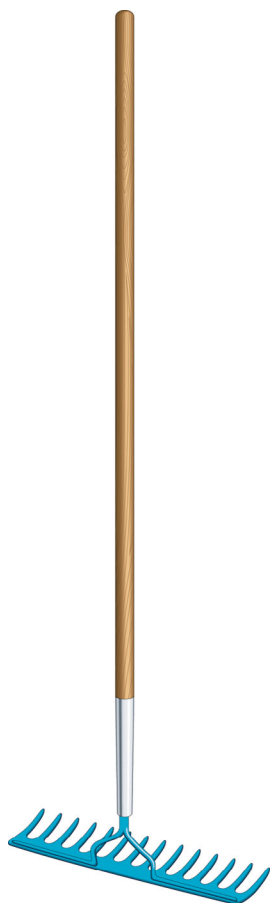
Tool with metal tines, which make it easier to loosen soil that is hard or contains many stones or roots.

**shovel**

Tool used for digging holes and manipulating various objects, such as soil, sand and compost.

**spade**

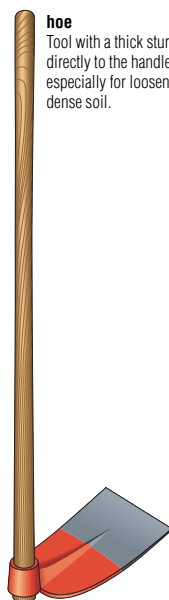
Tool with a flat or slightly concave blade, used mainly for turning over soil.

**rake**

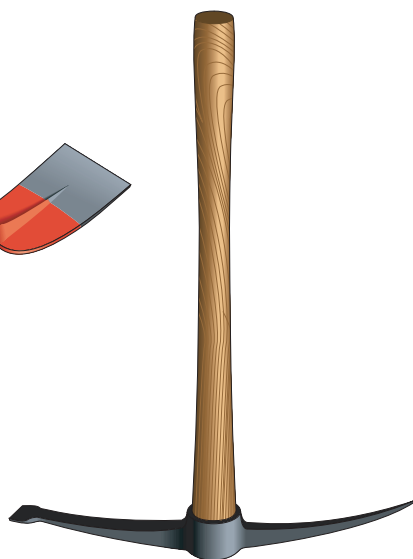
Tool with tines perpendicular to the handle, for leveling the soil, removing pebbles and gathering debris.

**hook**

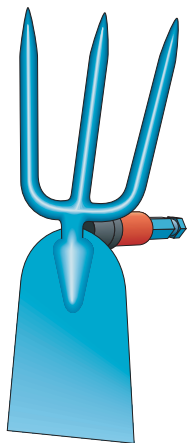
Tool with curved tines, used to handle fertilizer and compost, pull up root vegetables and loosen or weed the soil.

**hoe**

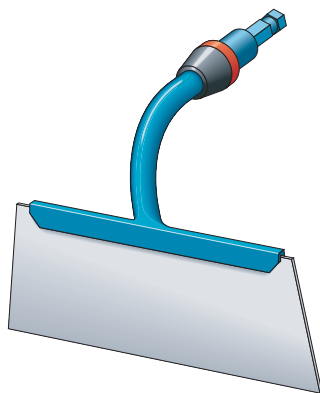
Tool with a thick sturdy blade attached directly to the handle; it is used especially for loosening and weeding dense soil.

**pick**

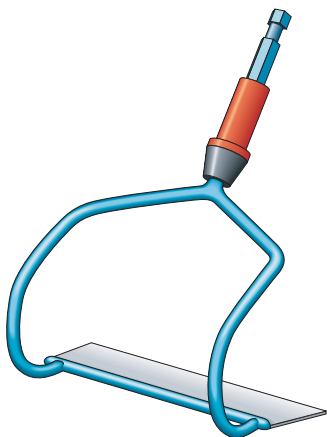
Tool whose head is pointed on one end and has a cutting edge on the other; it is used to break up hard or rocky soil.

**hoe-fork**

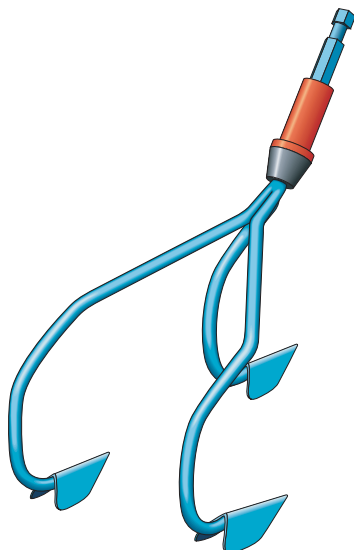
Tool with a blade, which serves as a hoe, and tines; it is used especially for making furrows.

**draw hoe**

Tool whose blade loosens, weeds and aerates the soil; it is also used to groom the soil around a plant.

**scuffle hoe**

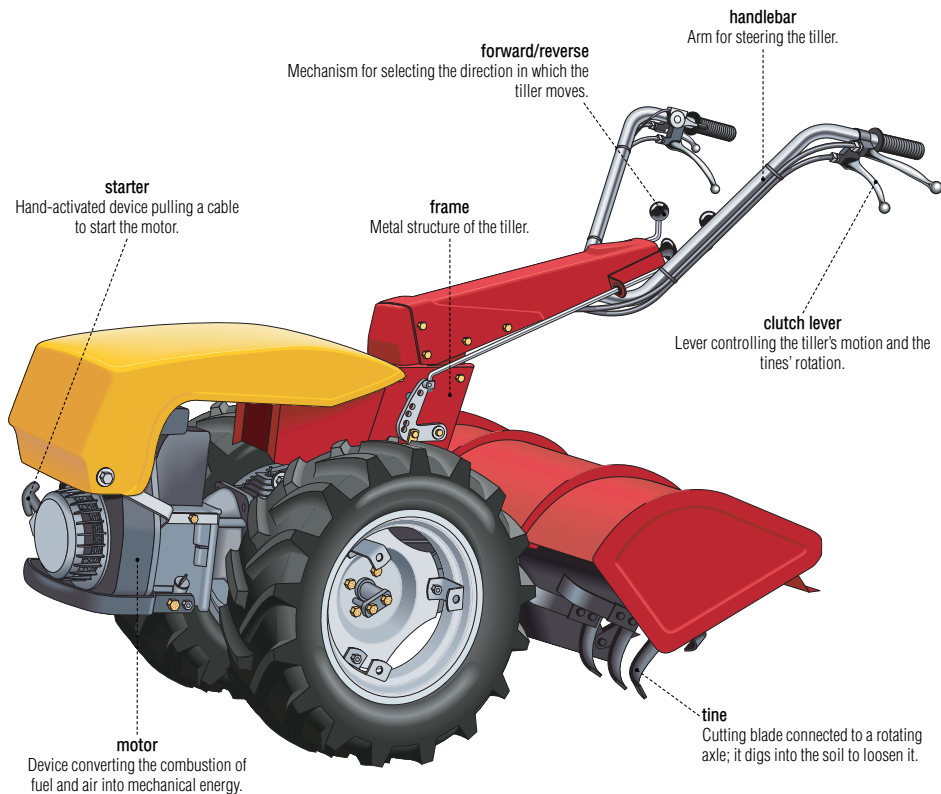
Tool whose blade, more slanted than that of the draw hoe, loosens, weeds and aerates the soil; it is also used for harvesting root vegetables.

**weeding hoe**

Tool with claws designed mainly for loosening and weeding soil.

tiller

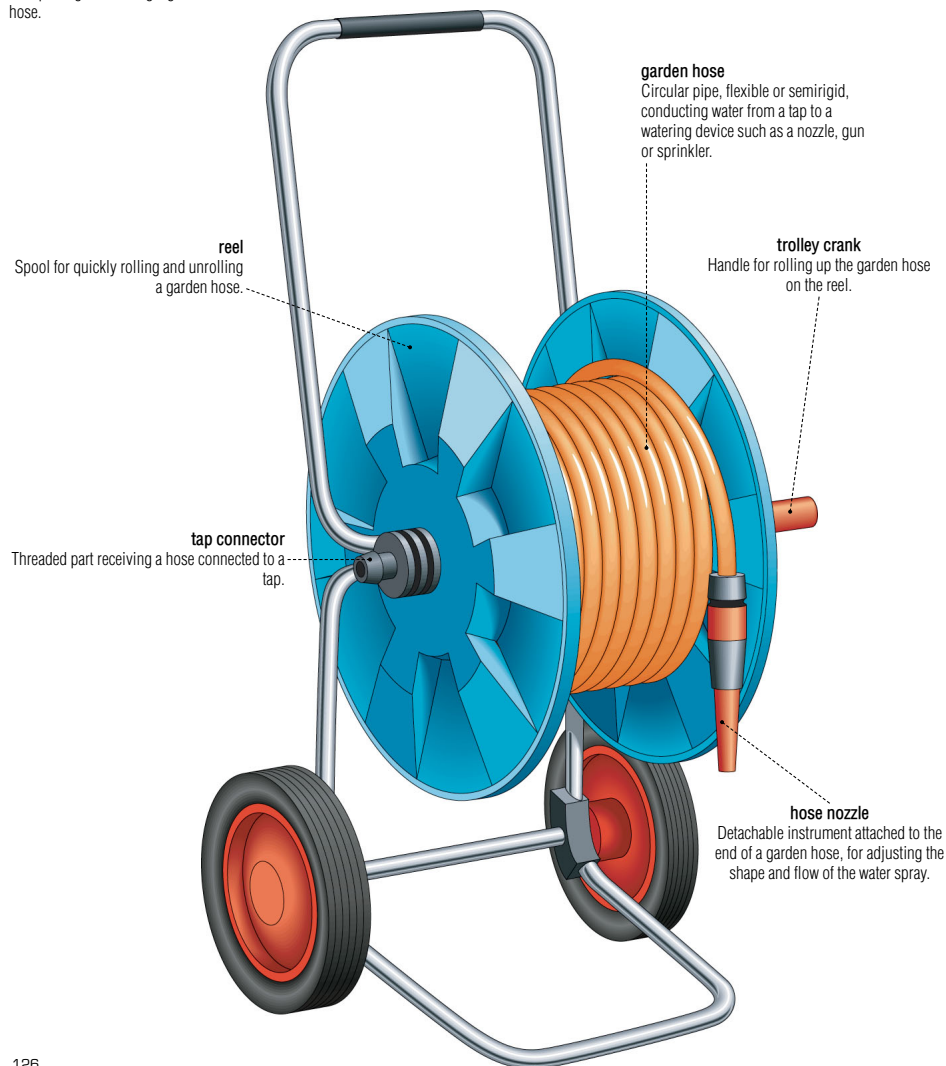
Motorized machine that uses its rotating tines to turn over and loosen the soil and mix fertilizer into it.



watering tools

hose trolley

Reel mounted on a cart, for transporting and storing a garden hose.

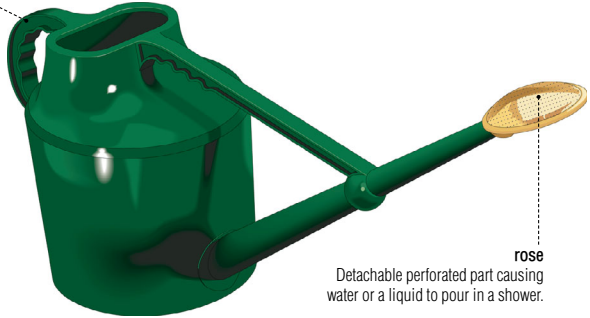


watering can

Container fitted with a long neck, usually with a rose at its end, used for sprinkling plants with water or treatment products.

handle

Part shaped like a semicircle for gripping the can.

**rose**

Detachable perforated part causing water or a liquid to pour in a shower.

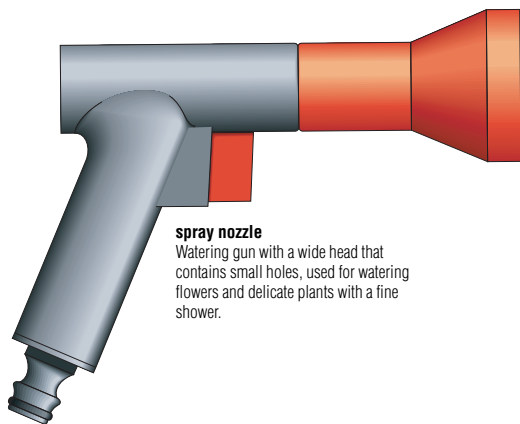
tank sprayer

Device with a tank and a wand that sprays fine droplets of water or treatment products on plants and soil.

**sprinkler hose**

Hose with small openings through which water flows; placed on the ground, it deeply waters large areas.

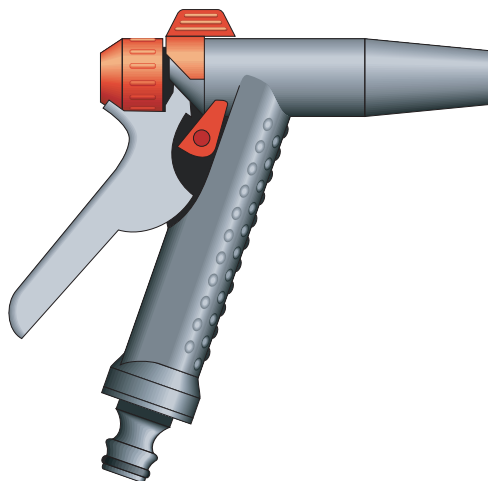


**spray nozzle**

Watering gun with a wide head that contains small holes, used for watering flowers and delicate plants with a fine shower.

**sprayer**

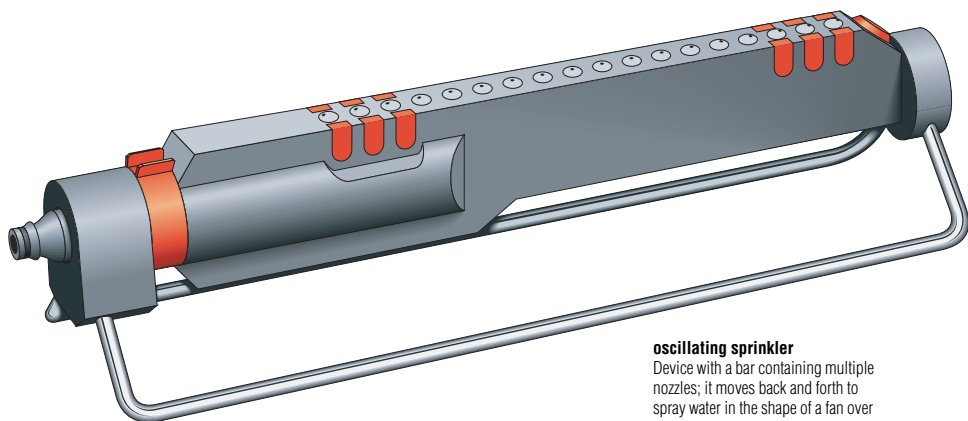
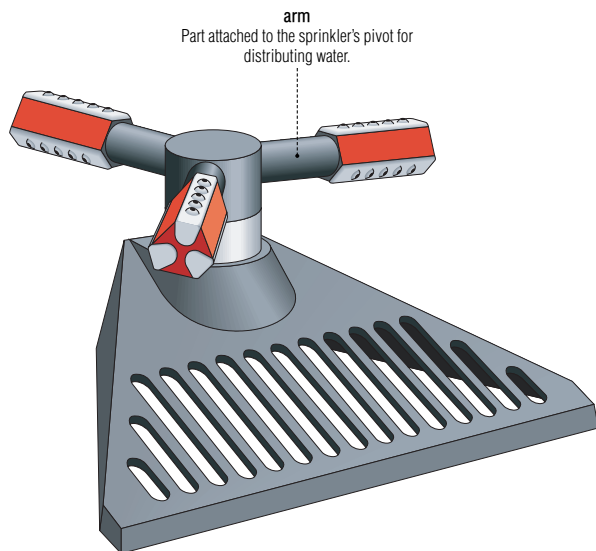
Small atomizer used mainly for spraying plant foliage and seedlings.

**pistol nozzle**

Watering nozzle activated by means of a trigger flow switch.

revolving sprinkler

Watering device with rotating arms that distribute water in a full circle.

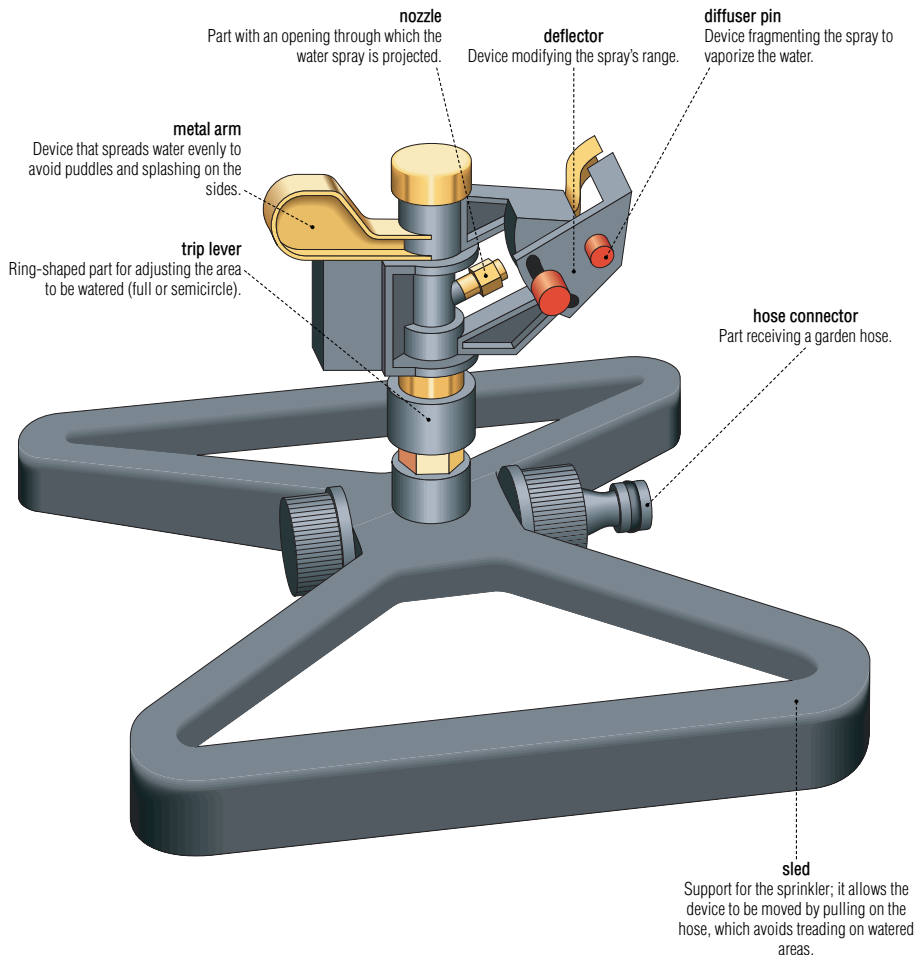
**oscillating sprinkler**

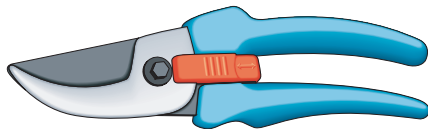
Device with a bar containing multiple nozzles; it moves back and forth to spray water in the shape of a fan over large areas.

watering tools

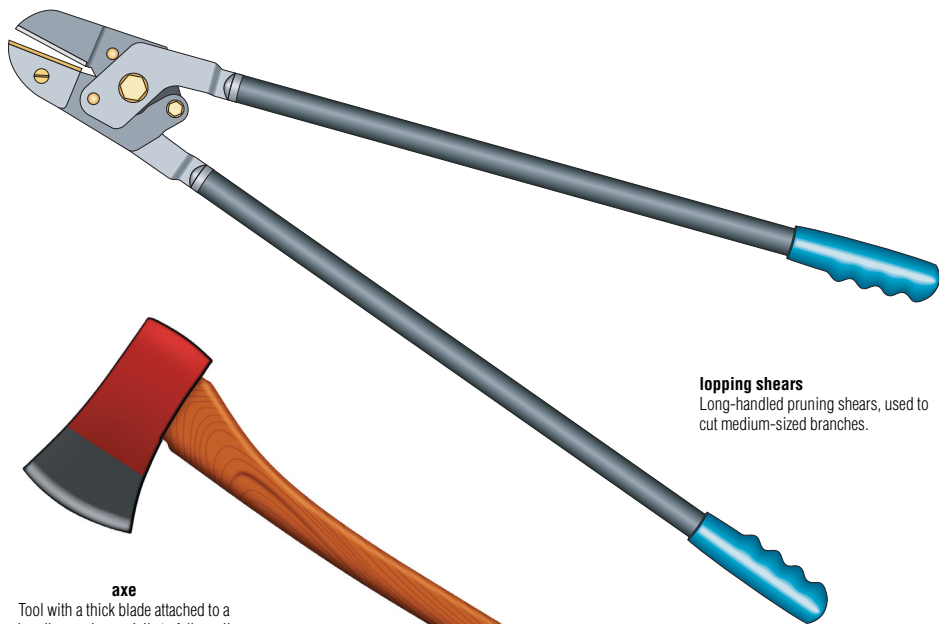
impulse sprinkler

Watering device whose single nozzle is mounted on a pivot that rotates in jerks, emitting a powerful spray to distribute water in a circle or arc.



**pruning shears**

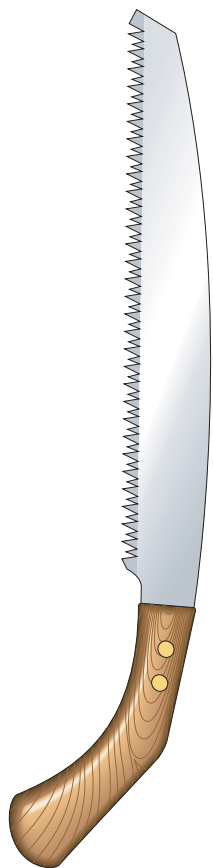
Tool resembling large scissors, used mainly for cutting stems and small branches.

**lopping shears**

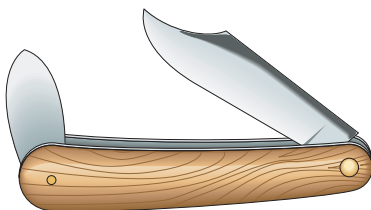
Long-handled pruning shears, used to cut medium-sized branches.

axe

Tool with a thick blade attached to a handle, used especially to fell small trees and chop wood.

**pruning saw**

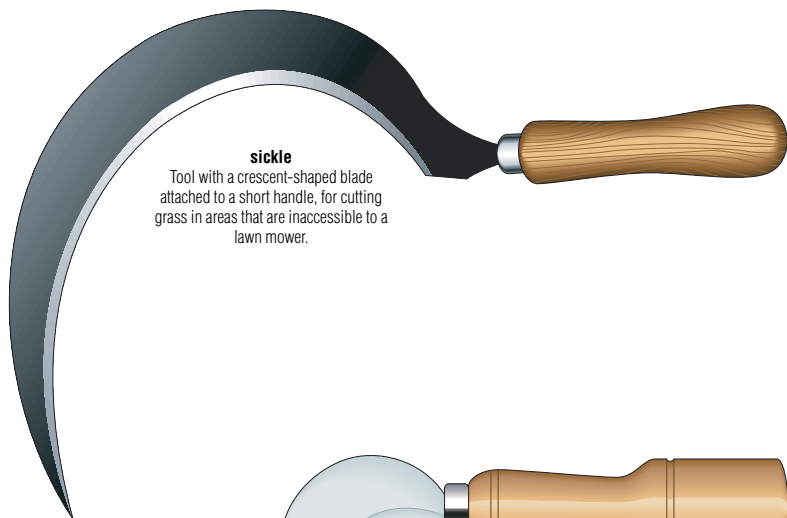
Handsaw with a straight or slightly curved blade, used to cut relatively large branches.

**grafting knife**

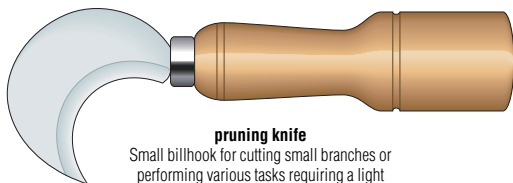
Small pointed knife, very sharp, designed to make grafting cuts.

**hedge shears**

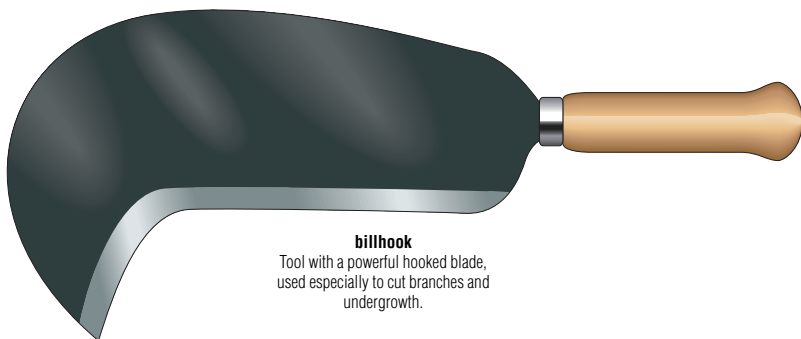
Tool with two blades that articulate like scissors, for trimming hedges, borders or perennials.

**sickle**

Tool with a crescent-shaped blade attached to a short handle, for cutting grass in areas that are inaccessible to a lawn mower.

**pruning knife**

Small billhook for cutting small branches or performing various tasks requiring a light cut.

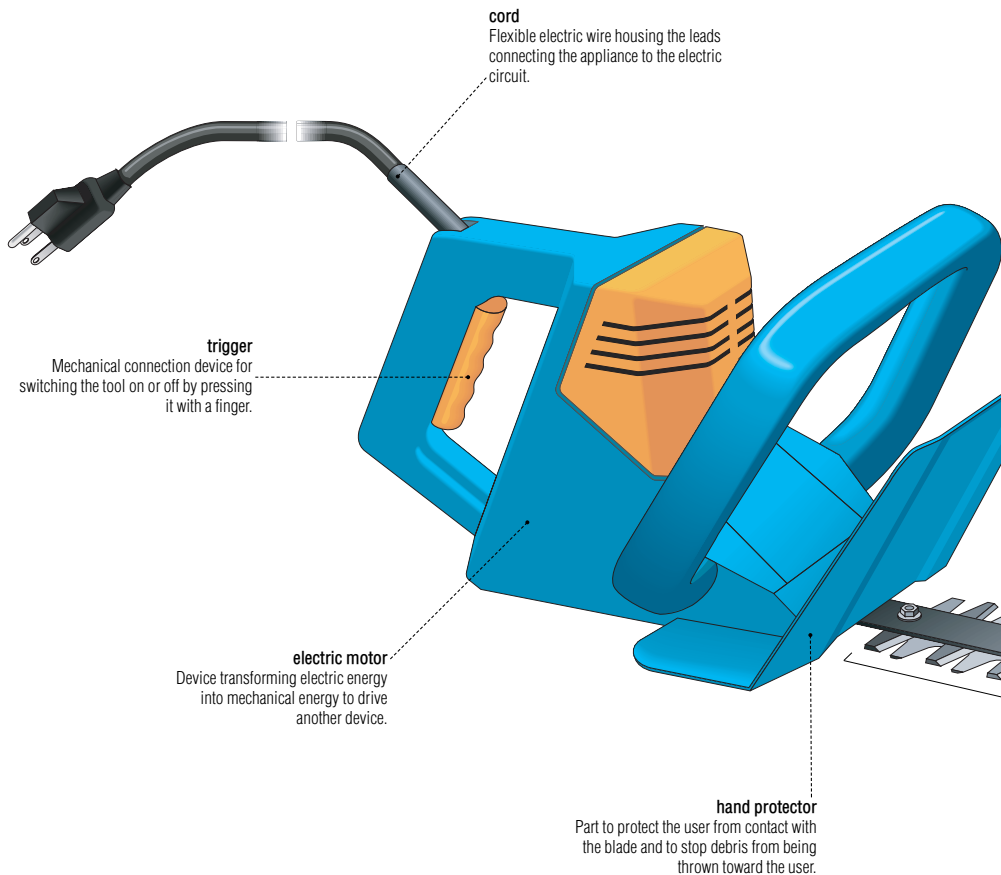
**billhook**

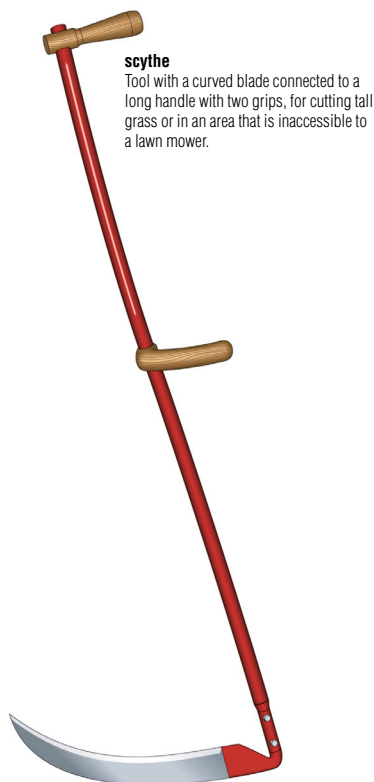
Tool with a powerful hooked blade, used especially to cut branches and undergrowth.

pruning and cutting tools

hedge trimmer

Portable electric tool with a toothed blade, for trimming hedges and borders.

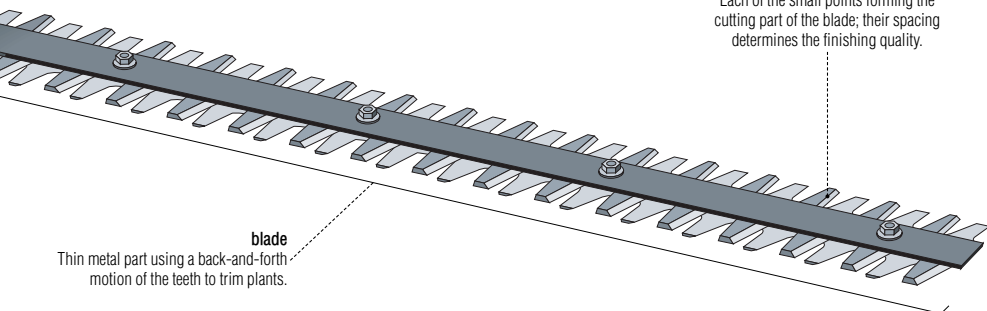


**scythe**

Tool with a curved blade connected to a long handle with two grips, for cutting tall grass or in an area that is inaccessible to a lawn mower.

**tree pruner**

Pruning shears mounted on a long pole whose blade is activated by a cord, for cutting hard-to-reach branches.

**tooth**

Each of the small points forming the cutting part of the blade; their spacing determines the finishing quality.

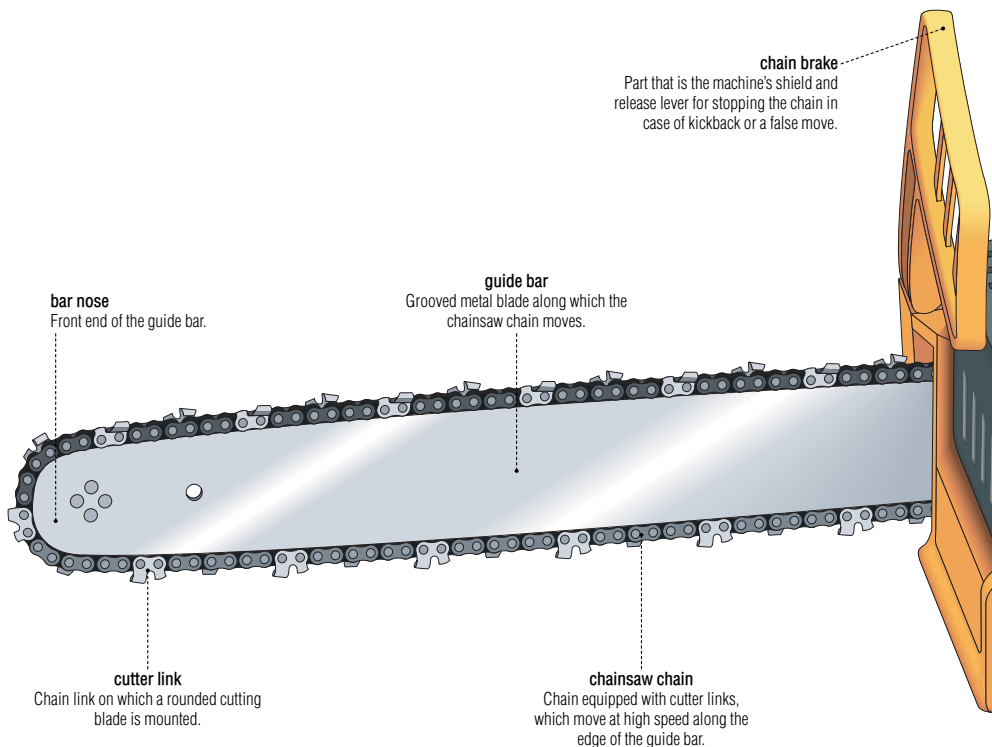
blade

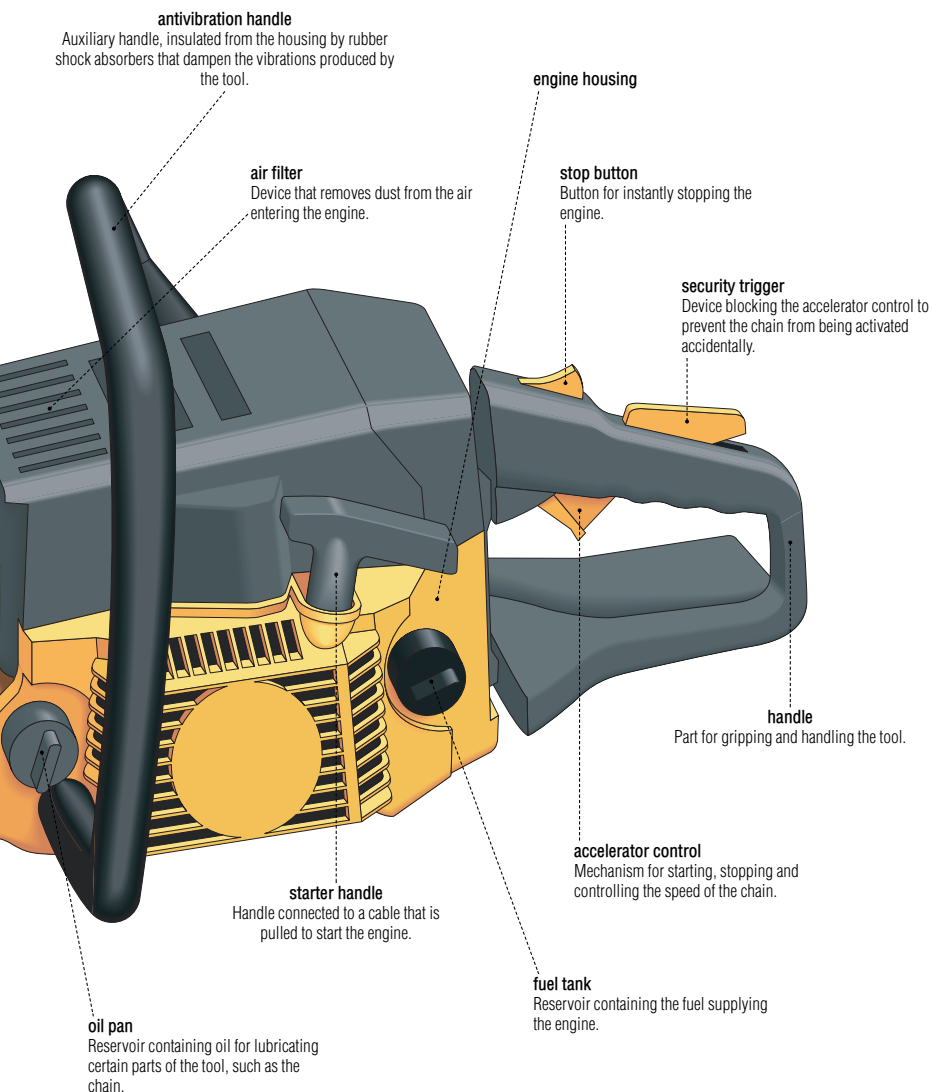
Thin metal part using a back-and-forth motion of the teeth to trim plants.

pruning and cutting tools

chainsaw

Portable motorized saw with a cutting chain; it is manipulated with two hands to cut tree limbs, fell trees and saw wood.

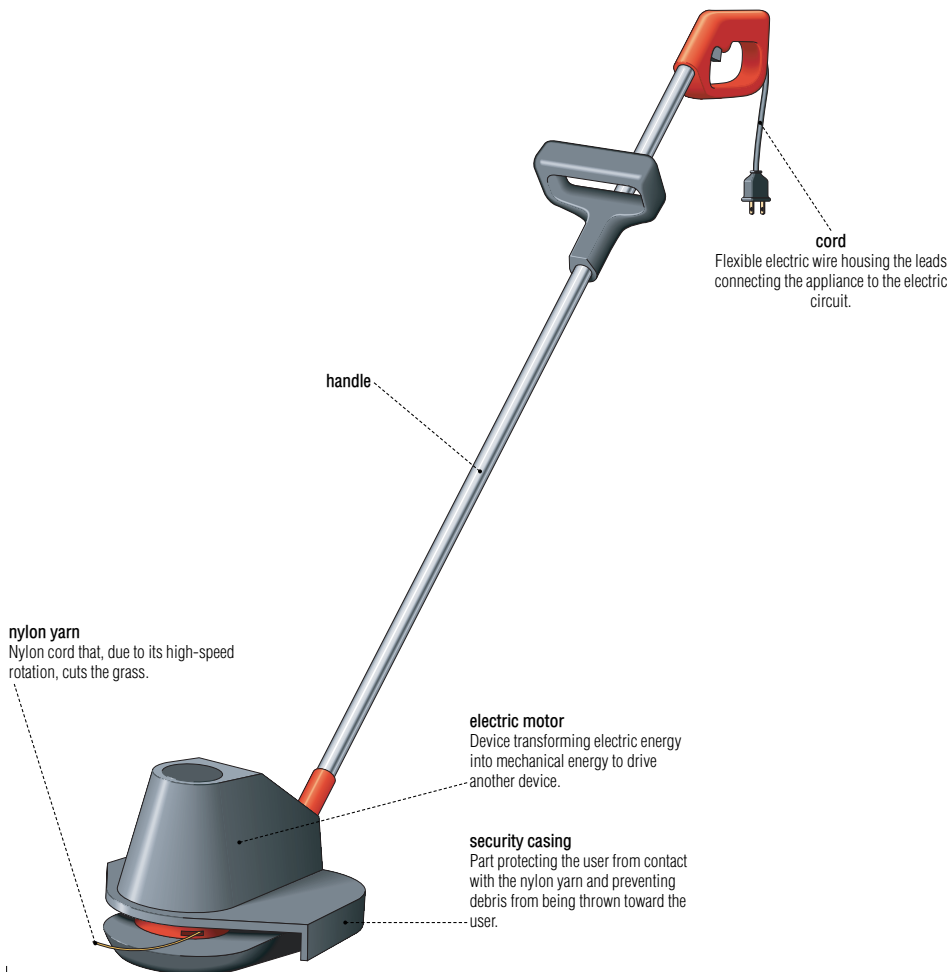




lawn care

edger

Portable motorized tool, equipped with nylon yarn rotating at high speed, used for cutting grass in places inaccessible to a lawn mower.



power mower

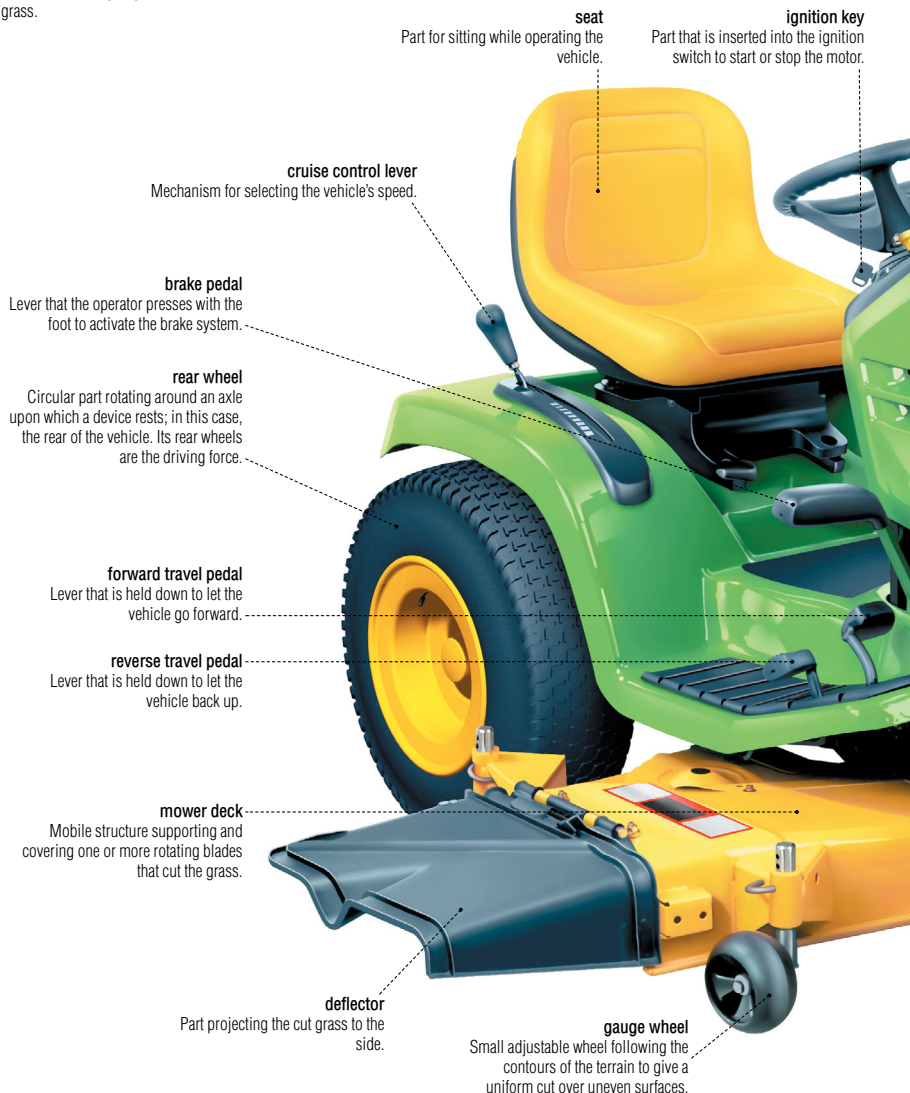
Motorized device using a rotating horizontal blade to cut grass over large areas.



lawn care

lawn tractor

Small motorized vehicle upon which a mower deck is fixed, for cutting large expanses of grass.



steering wheel

Circular instrument used by the operator for steering the front wheels.

mower deck lift lever

Lever for adjusting the mower deck's height.

hood

Lidlike part of the body covering and protecting the motor.

headlight

Lamp on the front of the vehicle to light up the space in front.

front wheel

Circular part rotating around an axle upon which a device rests; in this case, the front of the vehicle. Its front wheels guide the lawn tractor.

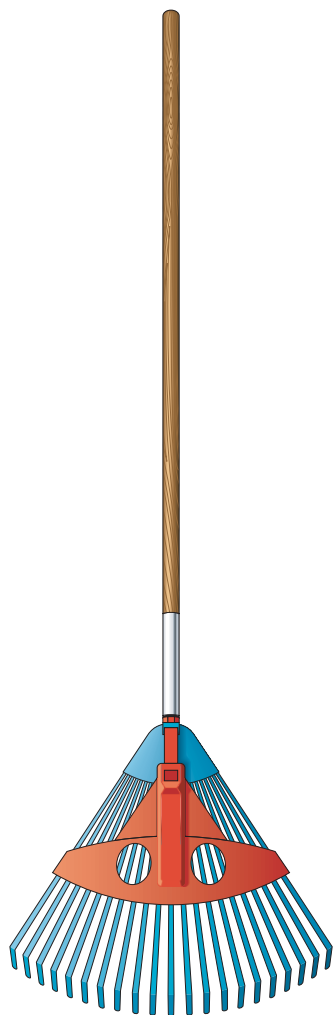


lawn care

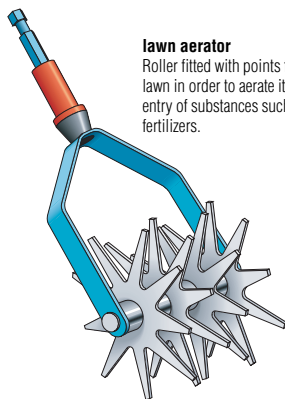
hand mower

Hand tool equipped with a rotating cutting cylinder, used for mowing the grass over a small area.

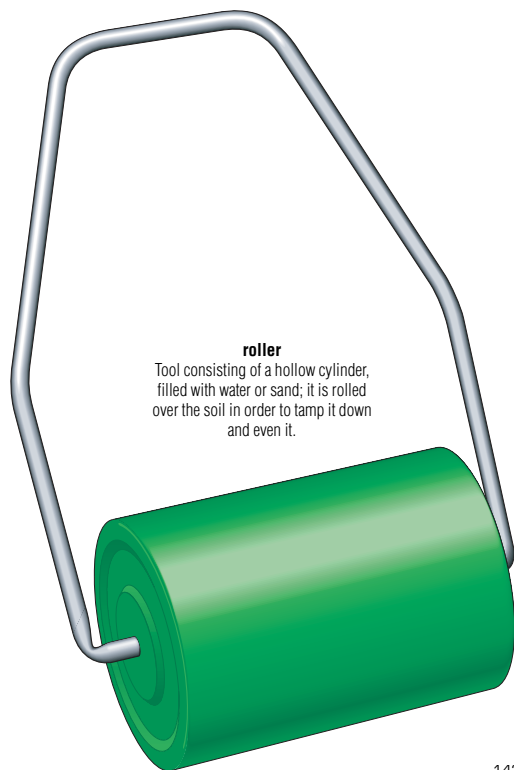


**lawn rake**

Instrument equipped with flexible metal tines, arranged like a fan, used to gather dead leaves, cut grass or bits of debris on the lawn.

**lawn aerator**

Roller fitted with points for puncturing the lawn in order to aerate it and facilitate the entry of substances such as water and fertilizers.

**roller**

Tool consisting of a hollow cylinder, filled with water or sand; it is rolled over the soil in order to tamp it down and even it.

ladders and stepladders

Movable devices of wood or metal, composed of rungs or steps and used to reach relatively high areas.



fruit-picking ladder

Double ladder specially designed for picking fruit and for pruning and maintaining trees.



multipurpose ladder

Ladder with several folds, which can be locked in a number of positions.

stepladder

Small ladder, often folding, that is usually composed of three to six steps.

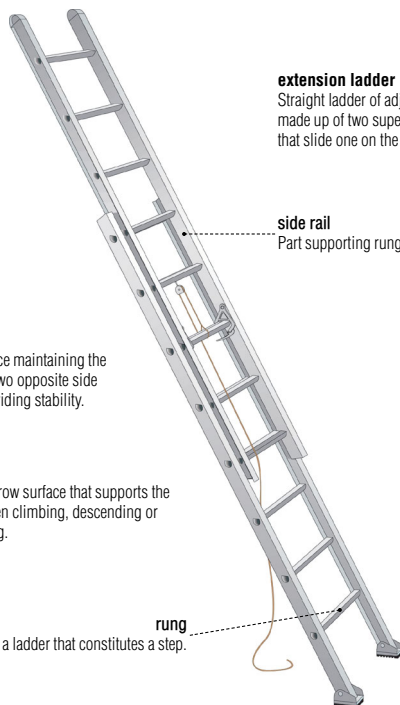


brace

Folding cross piece maintaining the gap between the two opposite side rails, thereby providing stability.

step

Flat narrow surface that supports the feet when climbing, descending or standing.



extension ladder

Straight ladder of adjustable height, made up of two superimposed planes that slide one on the other.

side rail

Part supporting rungs or steps.

rung

Bar on a ladder that constitutes a step.

straight ladder

Ladder that leans against a wall, comprised of two parallel side rails joined by rungs.

**hook ladder**

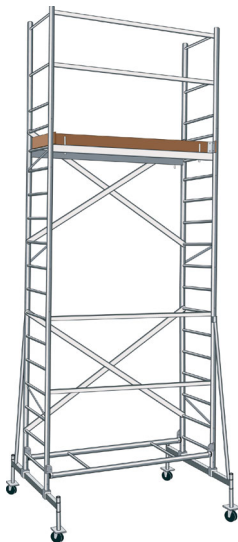
Straight ladder with one end having fixed or detachable hooks to keep the ladder in place on a structure.

**rope ladder**

Suspension ladder whose side rails and rungs are made of cord.

**ladder scaffold**

Movable structure made up of two vertical ladders and a work platform as well as wheels fitted with blocking devices.

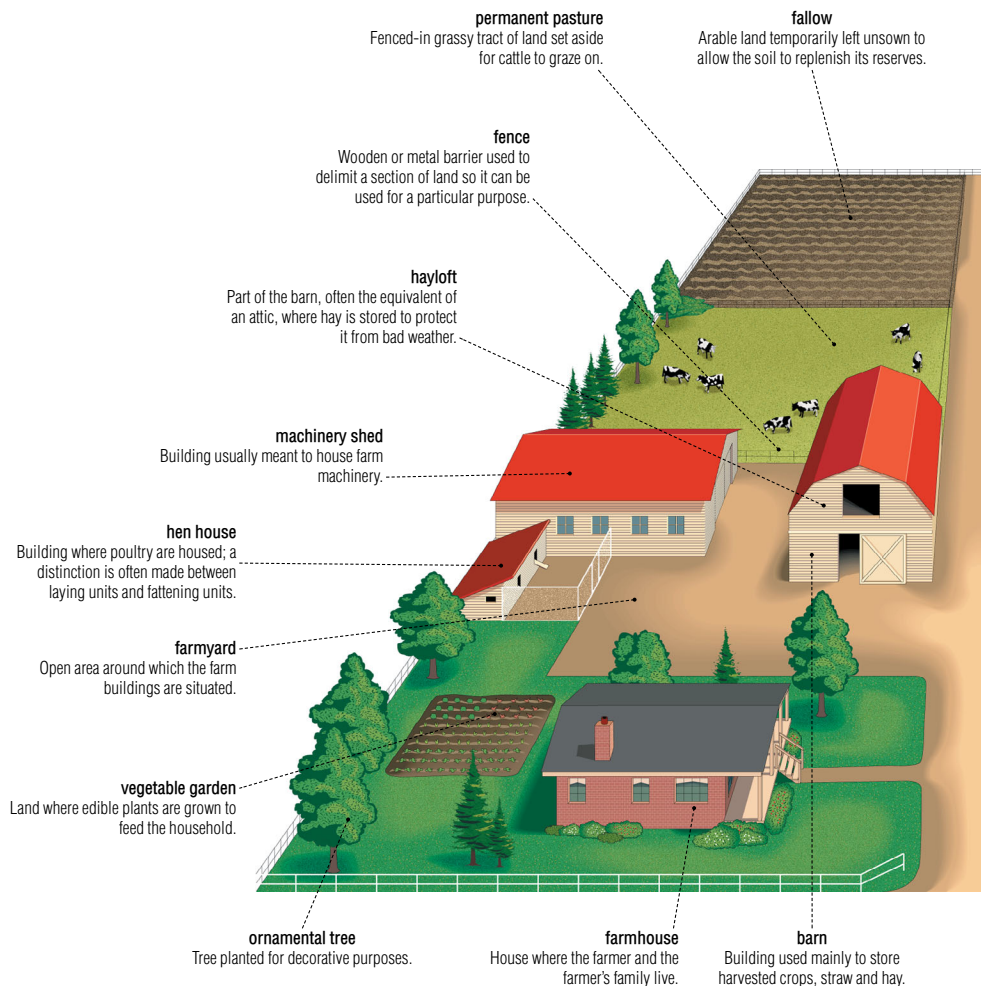
**rolling ladder**

Movable ladder fitted with a platform and a safety rail; it can be moved on wheels equipped with blocking devices.



farmstead

All the structures belonging to an agricultural concern and used as dwellings or in its operation.



meadow

Ground covered in grass, which the farmer mows to produce fodder (hay, alfalfa, etc.) for cattle.

dairy

Room where milk is stored and refrigerated before it is collected; it is also the place where milk is converted into butter and other by-products.

fodder corn

Variety of corn used as cattle feed.

cowshed

Building where bovines are housed; the animals are often separated by age or type (raised for meat or for milk).

tower silo

Cylindrical structure used to store silage; it is always filled from the top, using a specially constructed apparatus.

bunker silo

Long flat structure used to store silage; filling it requires no specialized equipment.

pigsty

Building used to house pigs, usually raised to be slaughtered.

enclosure

Fenced-in space where animals can move about.

hive

Shelter constructed to house a bee colony that produces honey and pollinates fruit trees.

orchard

Land planted with fruit trees.

sheep shelter

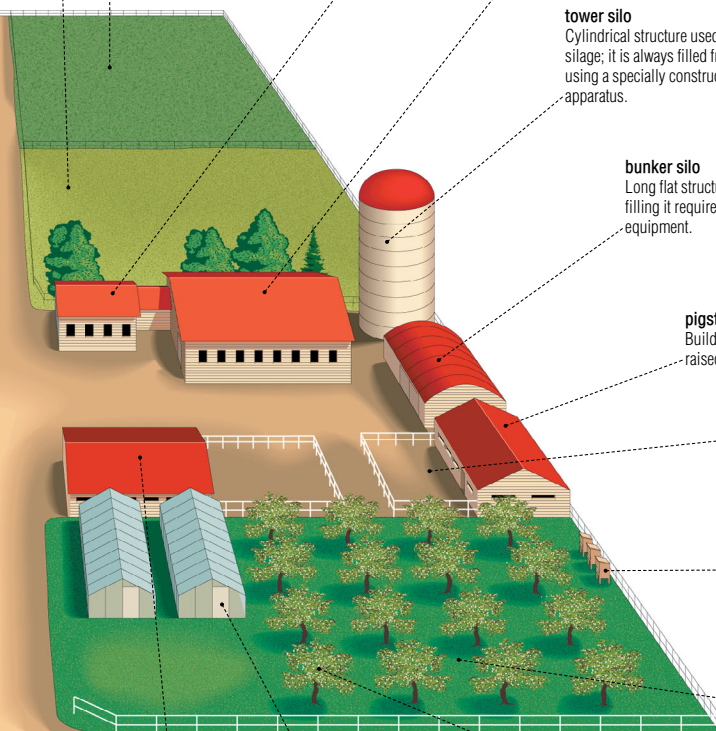
Building where ovines (rams and ewes) are housed; these sheep are raised mainly for their meat and wool, and sometimes for their milk.

greenhouse

Structure with translucent walls where vegetables are grown under controlled conditions that promote their growth.

fruit tree

Tree that bears edible fruit, usually intended for human consumption.

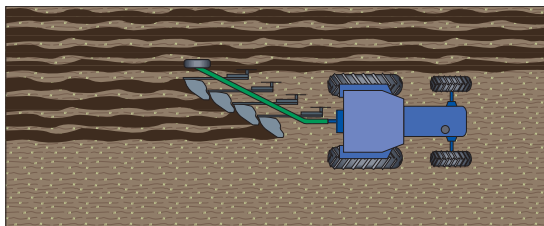


steps for cultivating soil

pulverizing soil

ribbing plow

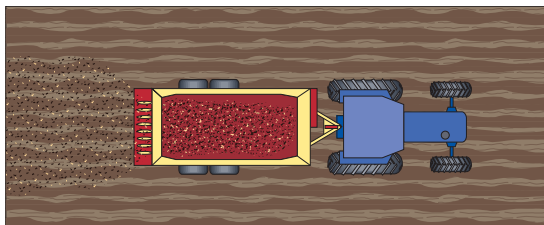
Plowing-tilling device for cutting up and plowing in furrow slices.



plowing soil

manure spreader

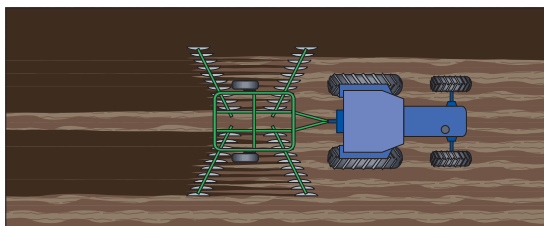
Device for scattering a mixture of litter and fermented animal waste over the soil to fertilize it.



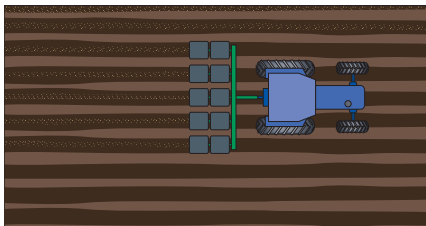
fertilizing soil

tandem disc harrow

Device with four disc trains arranged in two opposing V patterns; it loosens the soil that has already been plowed and eliminates weeds.



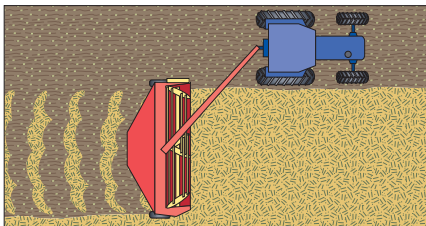
planting



seed drill

Farming tool that spreads and plows seeds into the soil following straight lines (furrows).

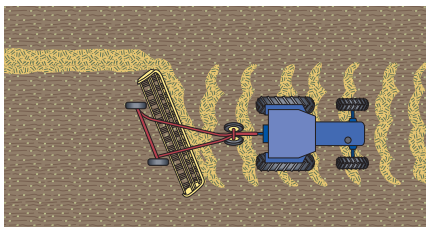
mowing



flail mower

Device that cuts the forage stalks as it moves and prepares them for the next harvesting phase (drying on the field and collection).

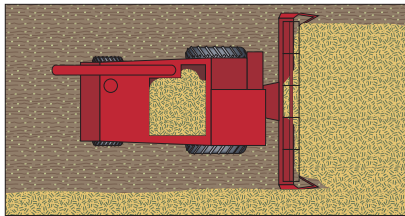
tedding



rake

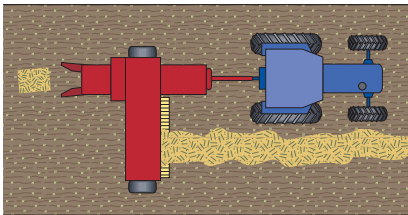
Device for turning over hay.

harvesting



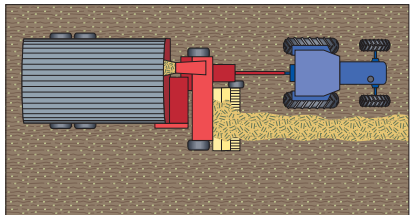
combine harvester

Vehicle that harvests seed crops, usually grain; it cuts, threshes and separates the seeds from the chaff.



hay baler

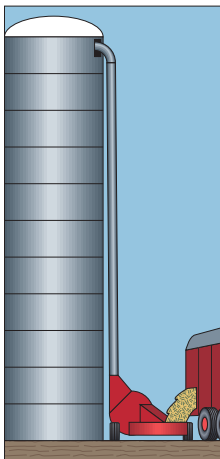
Device that harvests the forage and compresses it into bales.



forage harvester

Device that harvests herbage (such as alfalfa, clover and corn) for feeding livestock.

ensiling



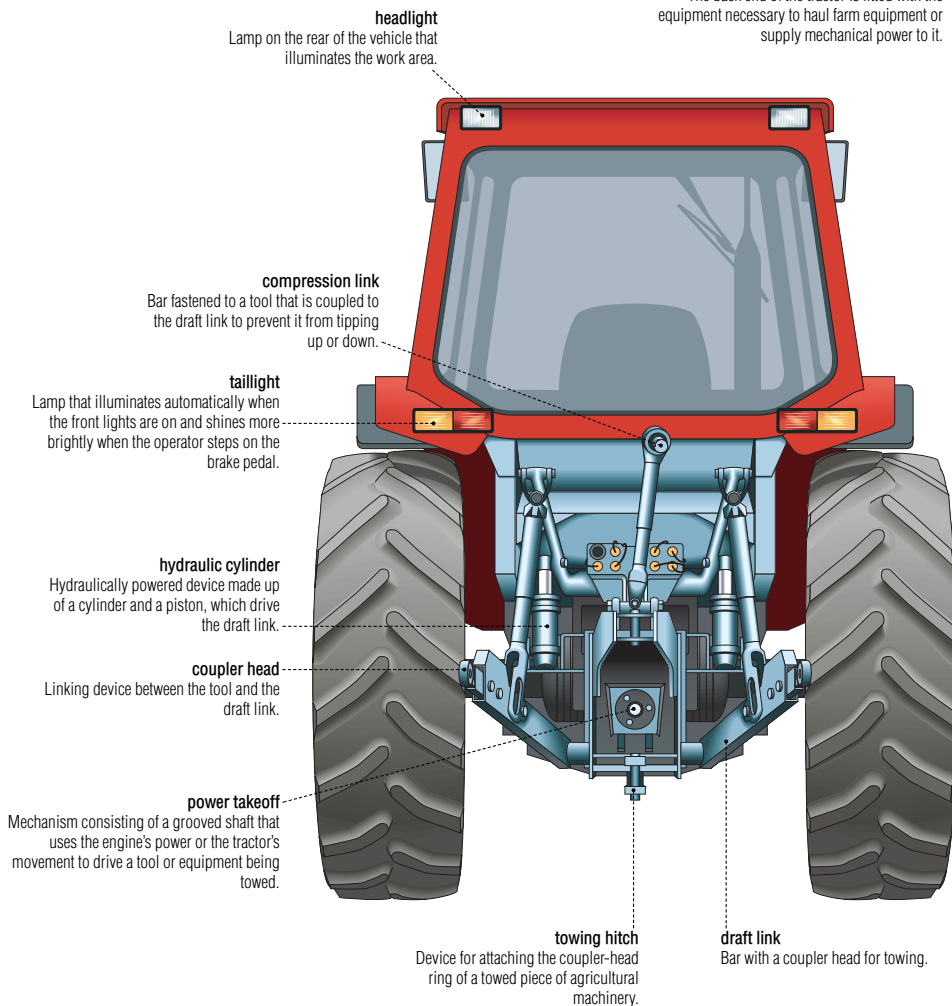
forage blower

Farm machine that forces the harvested forage (e.g., grass, wheat and corn) into the silo.

Motorized machine used for operating farm equipment and tools.

tractor: rear view

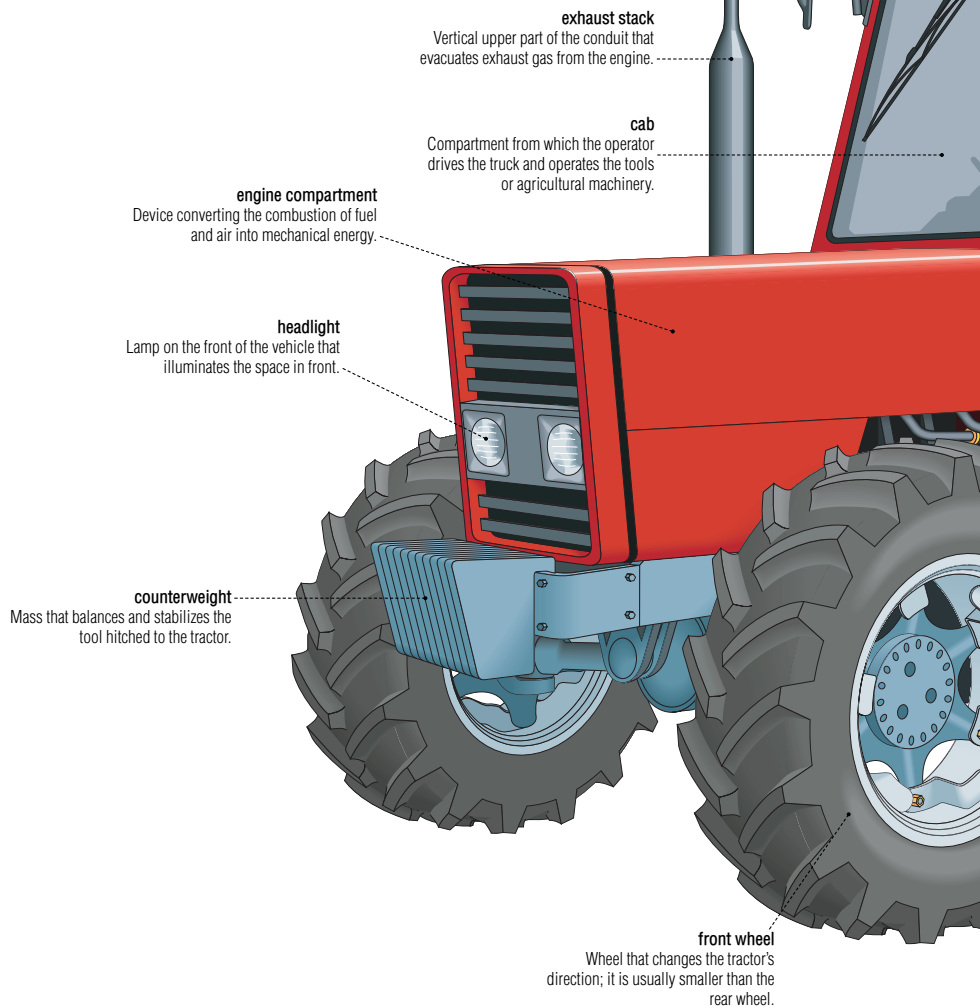
The back end of the tractor is fitted with the equipment necessary to haul farm equipment or supply mechanical power to it.



tractor

tractor: front view

There are tractors with two or four driving wheels and two or four wheels that change the direction of the tractor.



exhaust stack

Vertical upper part of the conduit that evacuates exhaust gas from the engine.

cab

Compartment from which the operator drives the truck and operates the tools or agricultural machinery.

engine compartment

Device converting the combustion of fuel and air into mechanical energy.

headlight

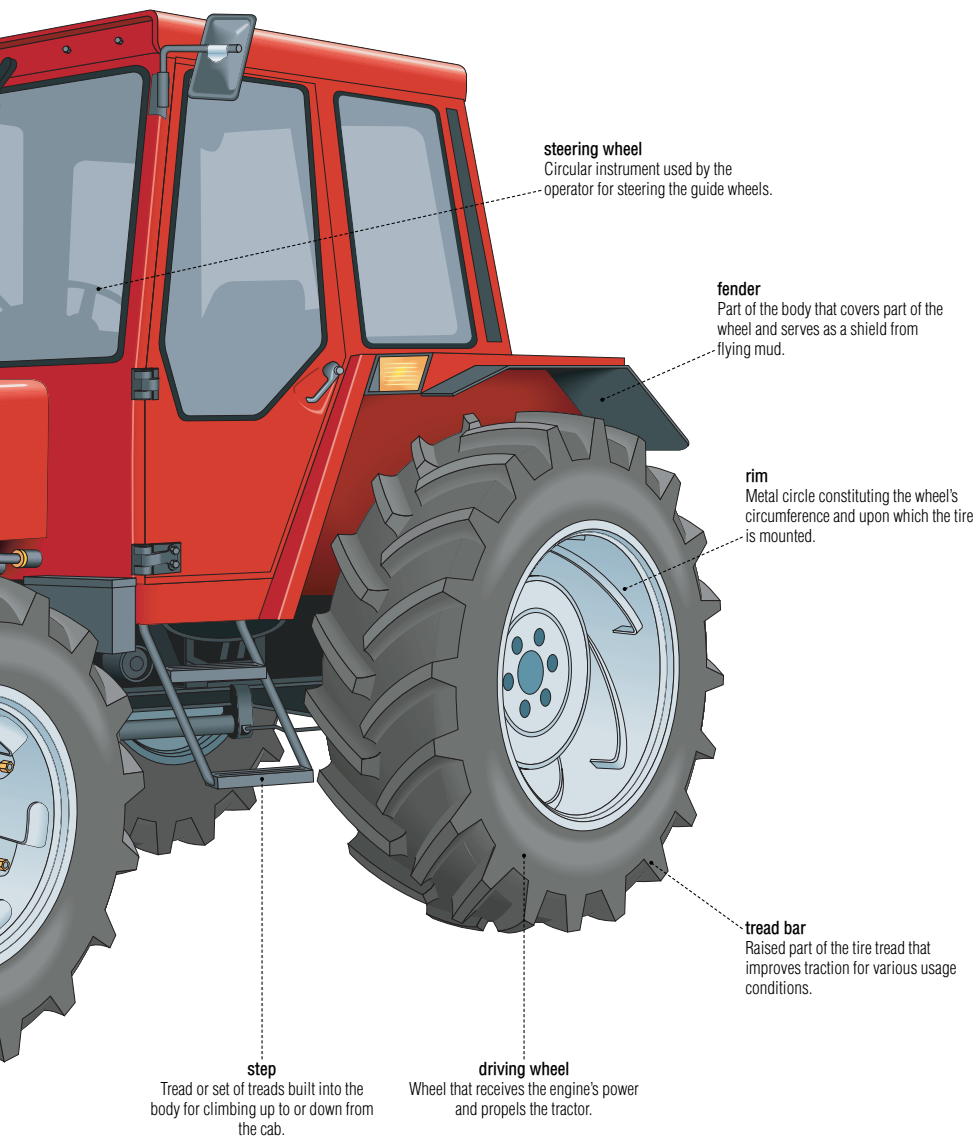
Lamp on the front of the vehicle that illuminates the space in front.

counterweight

Mass that balances and stabilizes the tool hitched to the tractor.

front wheel

Wheel that changes the tractor's direction; it is usually smaller than the rear wheel.

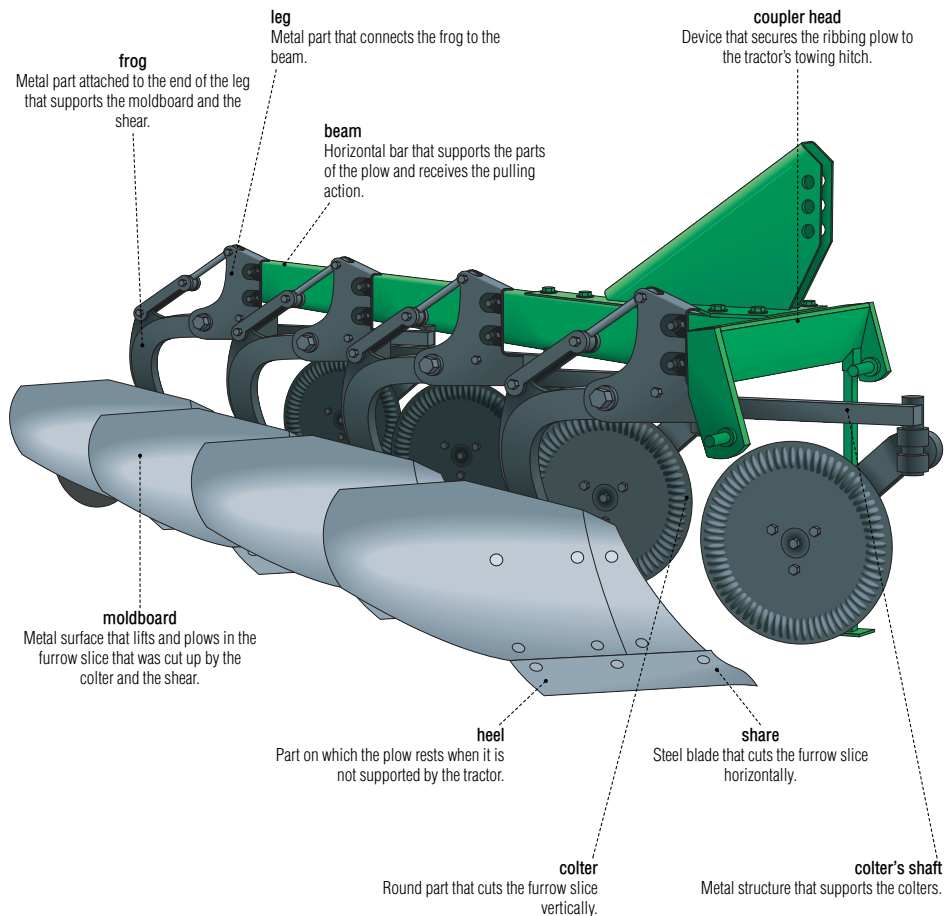


agricultural machinery

Mechanized devices used in farming.

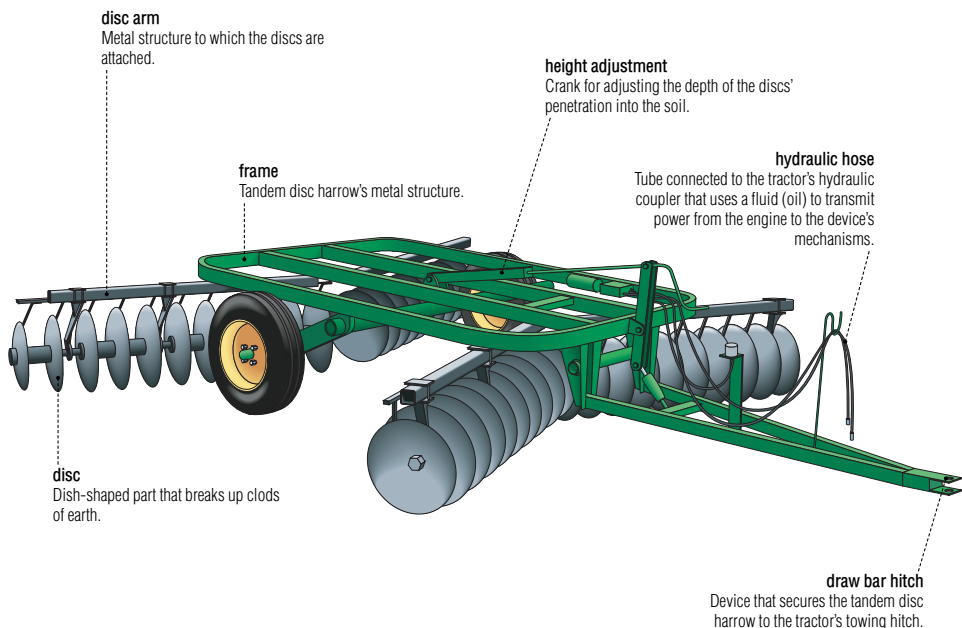
ribbing plow

Plowing-tilling device for cutting up and plowing in furrow slices.



tandem disc harrow

Device with four disc trains arranged in two opposing V patterns; it loosens the soil that has already been plowed and eliminates weeds.



manure spreader

Device for scattering a mixture of litter and fermented animal waste over the soil to fertilize it.

beater

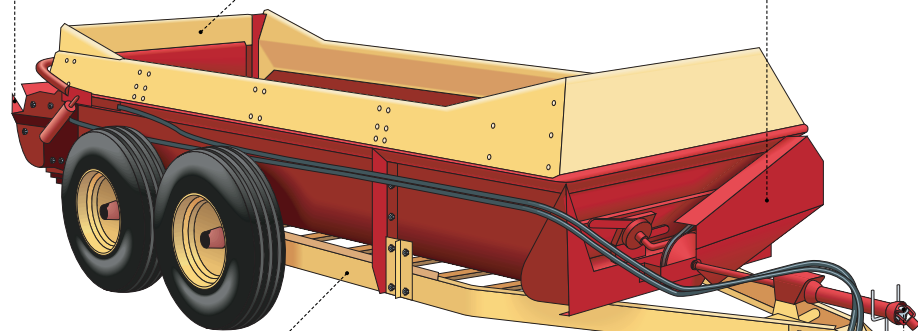
Rotating device that disperses manure over the soil.

box

Container that holds the manure.

chain drive

Belt that transmits the rotational movement of the power-takeoff shaft to the moving floor of the trailer to bring the manure back to the beater.



frame

Trailer's metal structure.

jack stand

Telescopic support for the draw bar hitch that supports the trailer when stationary.

hydraulic hose

Tube connected to the tractor's hydraulic coupler that uses a fluid (oil) to transmit power from the engine to the device's mechanisms.

draw bar hitch

Device that secures the manure spreader to the tractor's towing hitch.

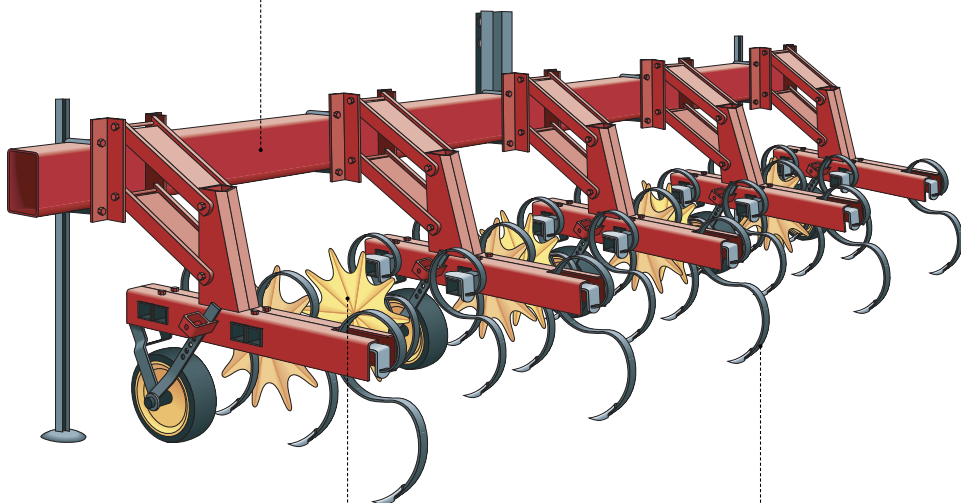
power-takeoff shaft

Device that hitches the machine's shaft to the tractor's power train to transmit the necessary power to operate it.

cultivator

Device with tines for working the top layer of the soil; it usually completes the plowing operation.

frame
Cultivator's metal structure.

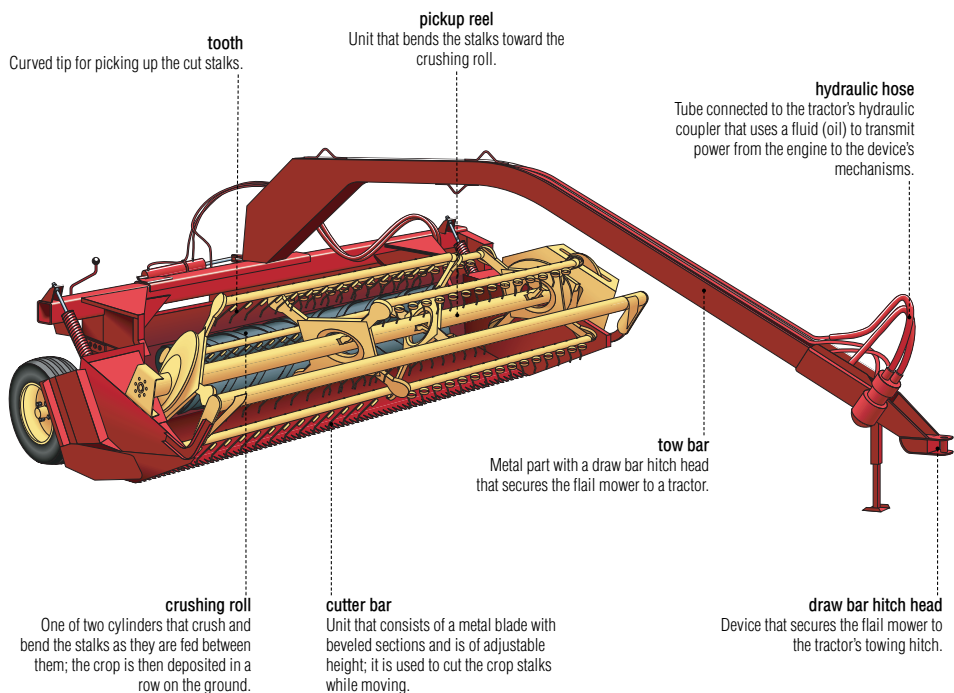


rotary hoe
Device whose mechanism is powered by the towing action of the tractor; it is made up of blades that aerate and level the field.

tine
Curved prong that digs into the soil to work it by moving it sideways.

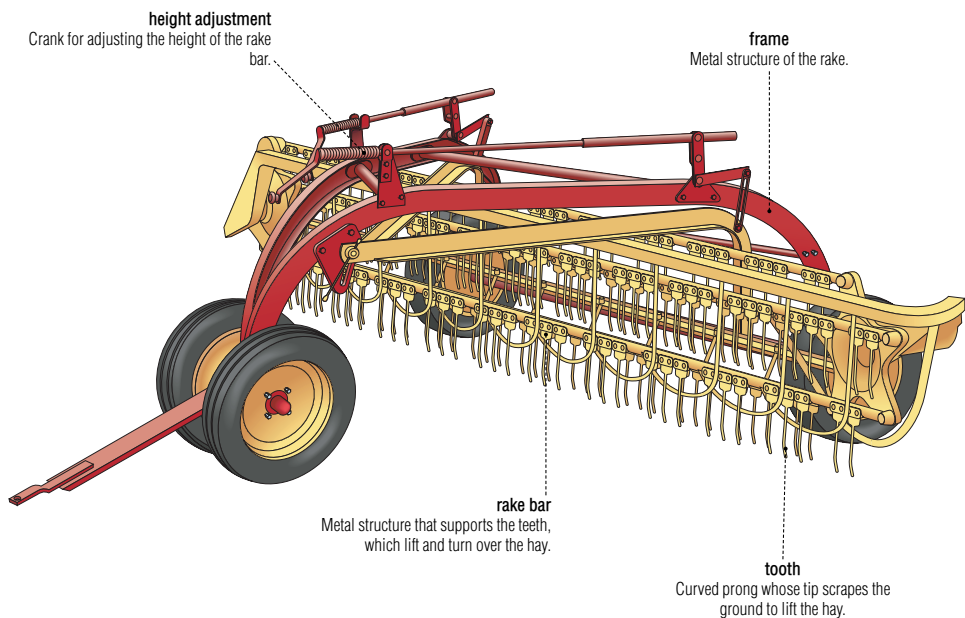
flail mower

Device that cuts the forage stalks as it moves and prepares them for the next harvesting phase (drying on the field and collection).



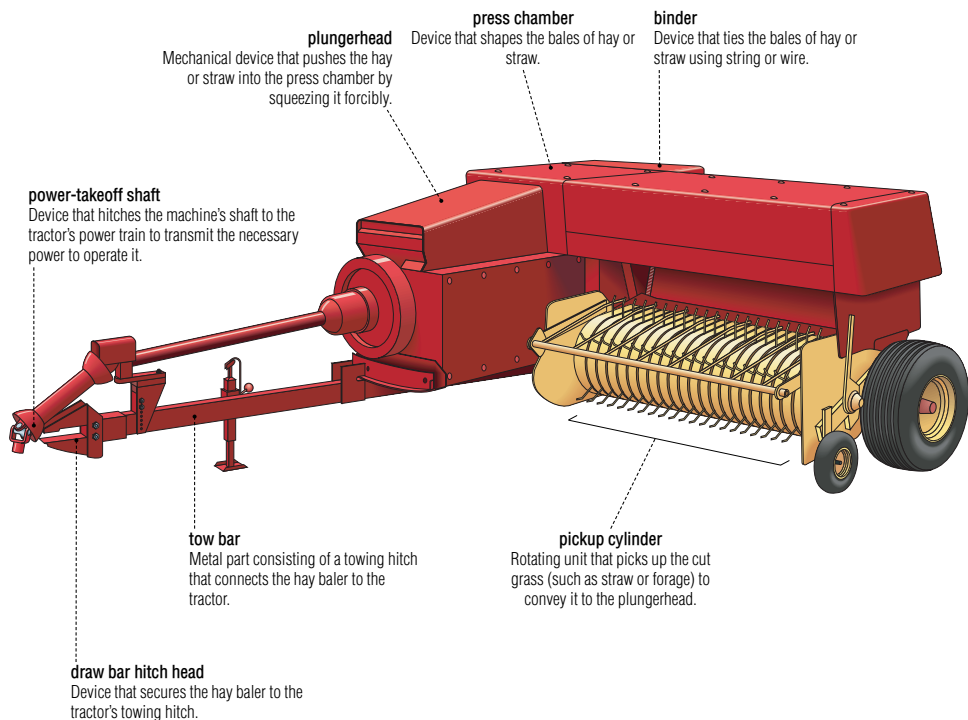
rake

Device for turning over hay.



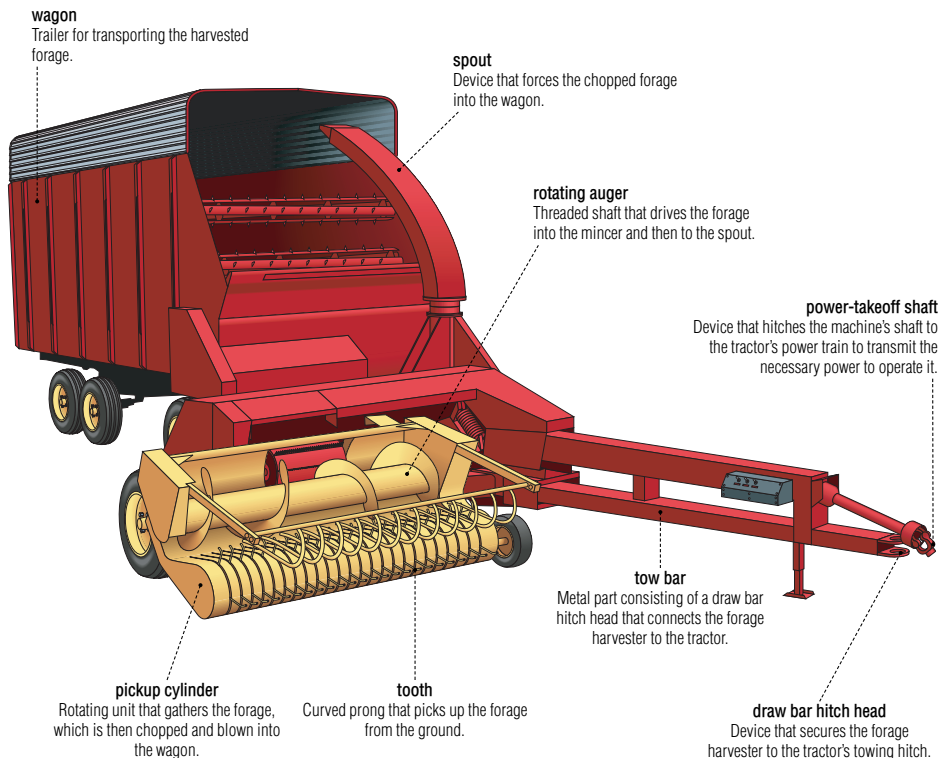
hay baler

Device that harvests the forage and compresses it into bales.



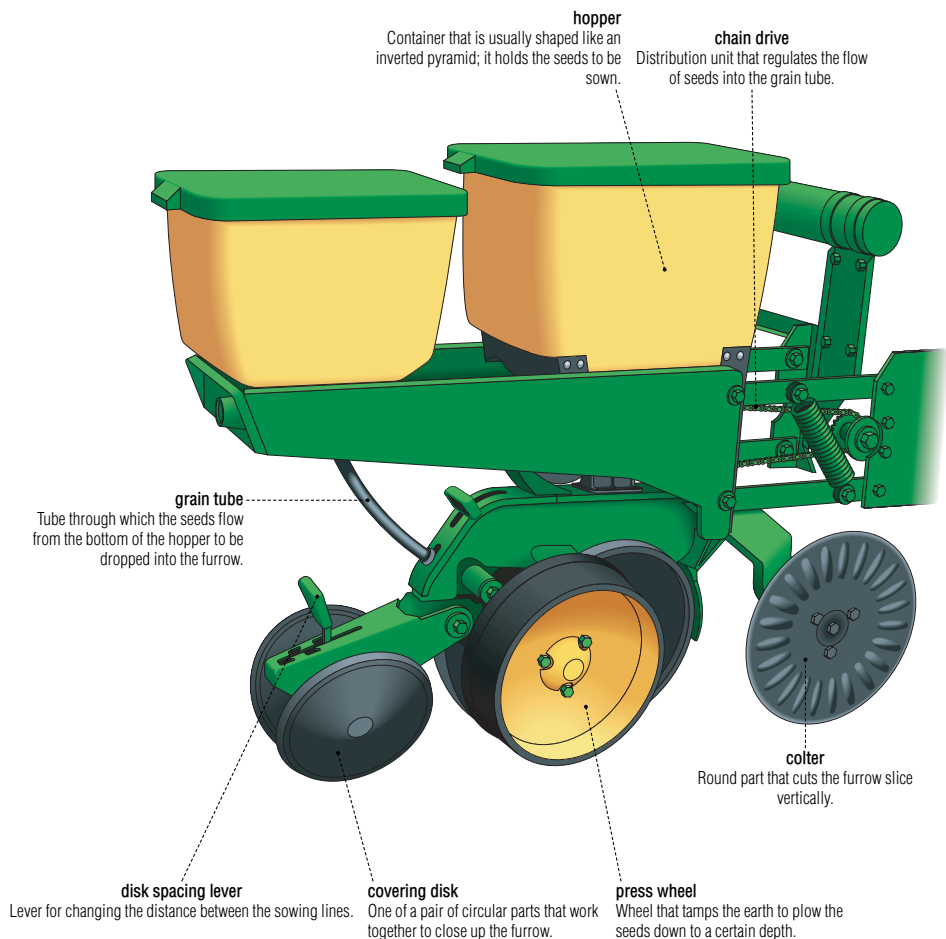
forage harvester

Device that harvests herbage (such as alfalfa, clover and corn) for feeding livestock.



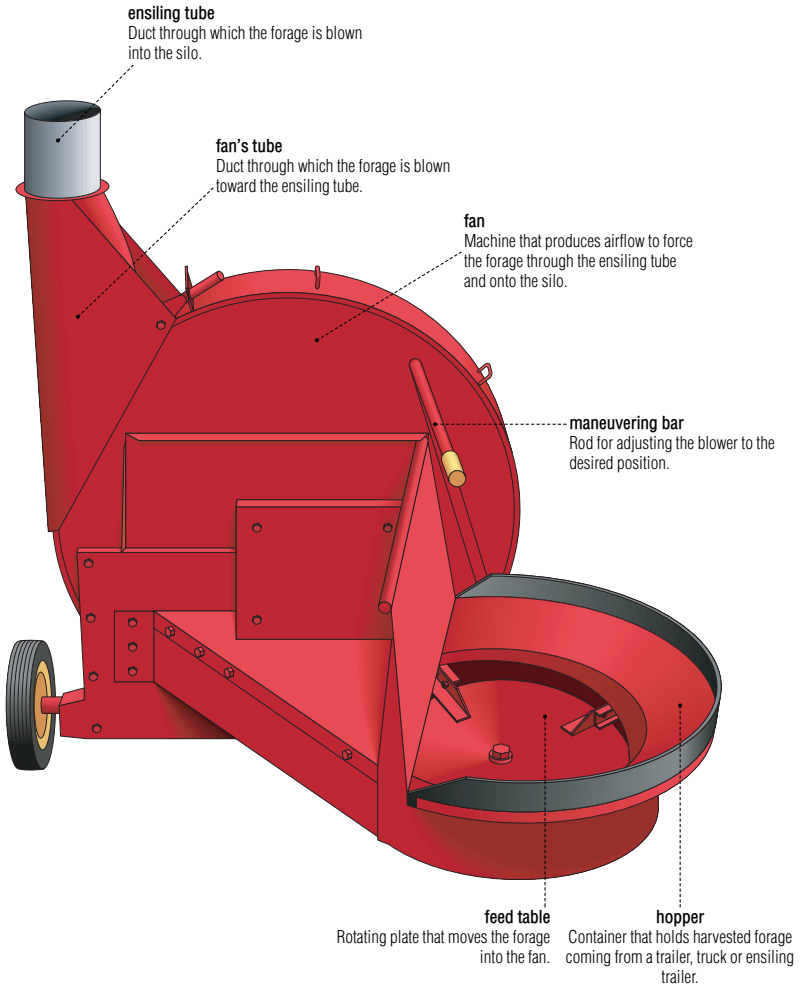
seed drill

Farming tool that spreads and plows seeds into the soil following straight lines (furrows).



forage blower

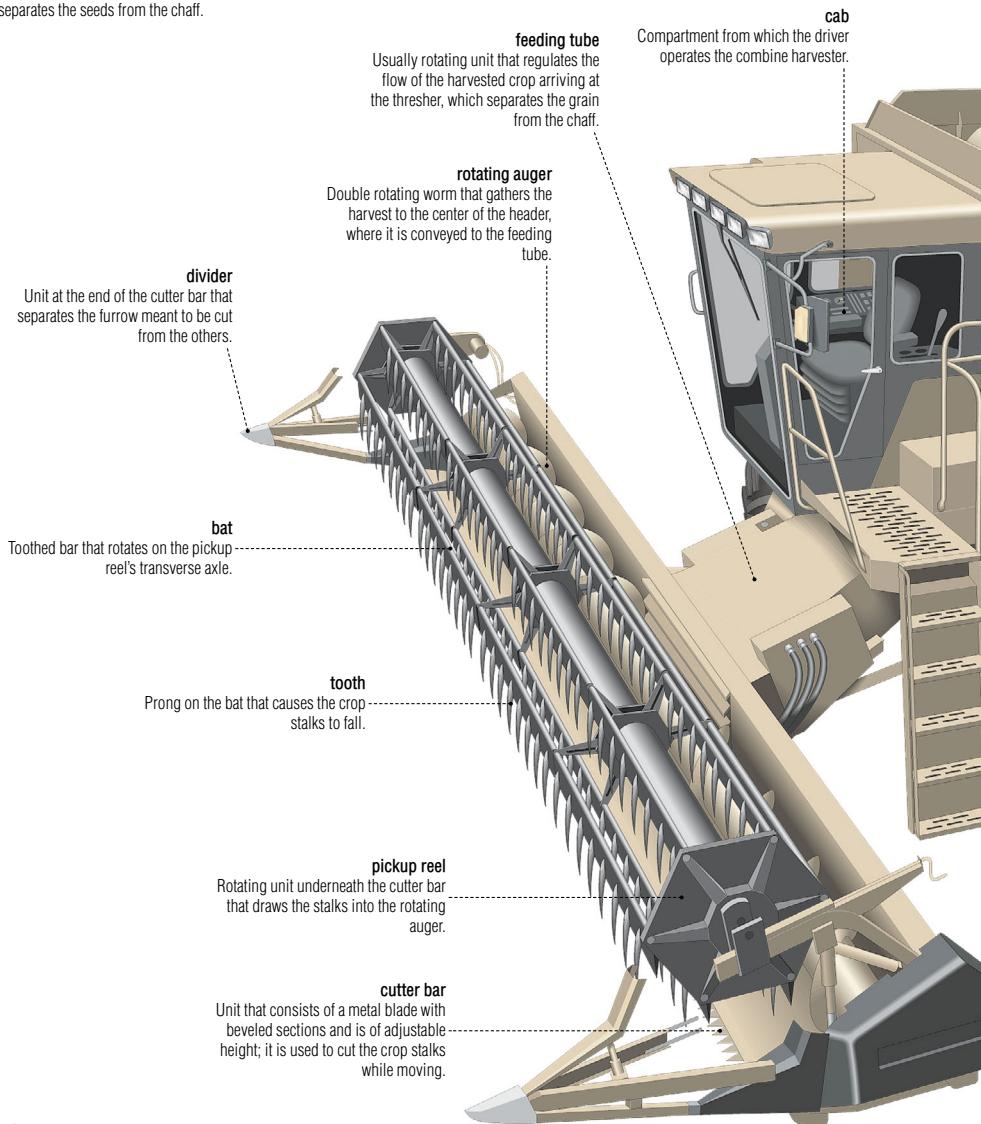
Farm machine that forces the harvested forage (e.g., grass, wheat and corn) into the silo.



agricultural machinery

combine harvester

Vehicle that harvests seed crops, usually grain; it cuts, threshes and separates the seeds from the chaff.



feeding tube

Usually rotating unit that regulates the flow of the harvested crop arriving at the thresher, which separates the grain from the chaff.

cab

Compartment from which the driver operates the combine harvester.

rotating auger

Double rotating worm that gathers the harvest to the center of the header, where it is conveyed to the feeding tube.

divider

Unit at the end of the cutter bar that separates the furrow meant to be cut from the others.

bat

Toothed bar that rotates on the pickup reel's transverse axle.

tooth

Prong on the bat that causes the crop stalks to fall.

pickup reel

Rotating unit underneath the cutter bar that draws the stalks into the rotating auger.

cutter bar

Unit that consists of a metal blade with beveled sections and is of adjustable height; it is used to cut the crop stalks while moving.

grain elevator

Mechanism that conveys the harvested grain to the tank.

grain tank

Container that temporarily stores harvested grain.

unloading tube

Duct through which the grain is transferred from the tank to a trailer.

straw spreader

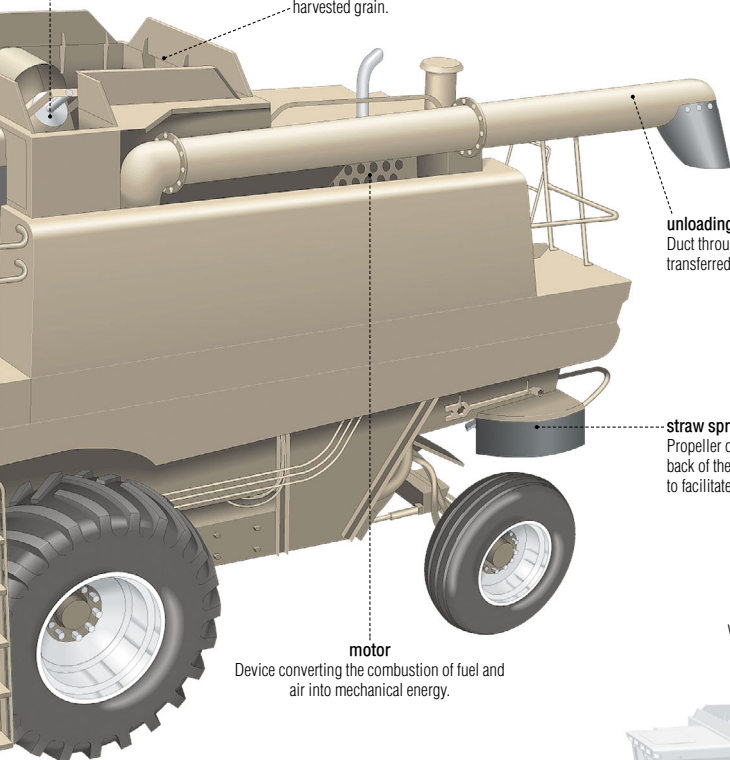
Propeller device that spreads hay from the back of the harvester the width of the cut to facilitate plowing the hay under the soil.

motor

Device converting the combustion of fuel and air into mechanical energy.

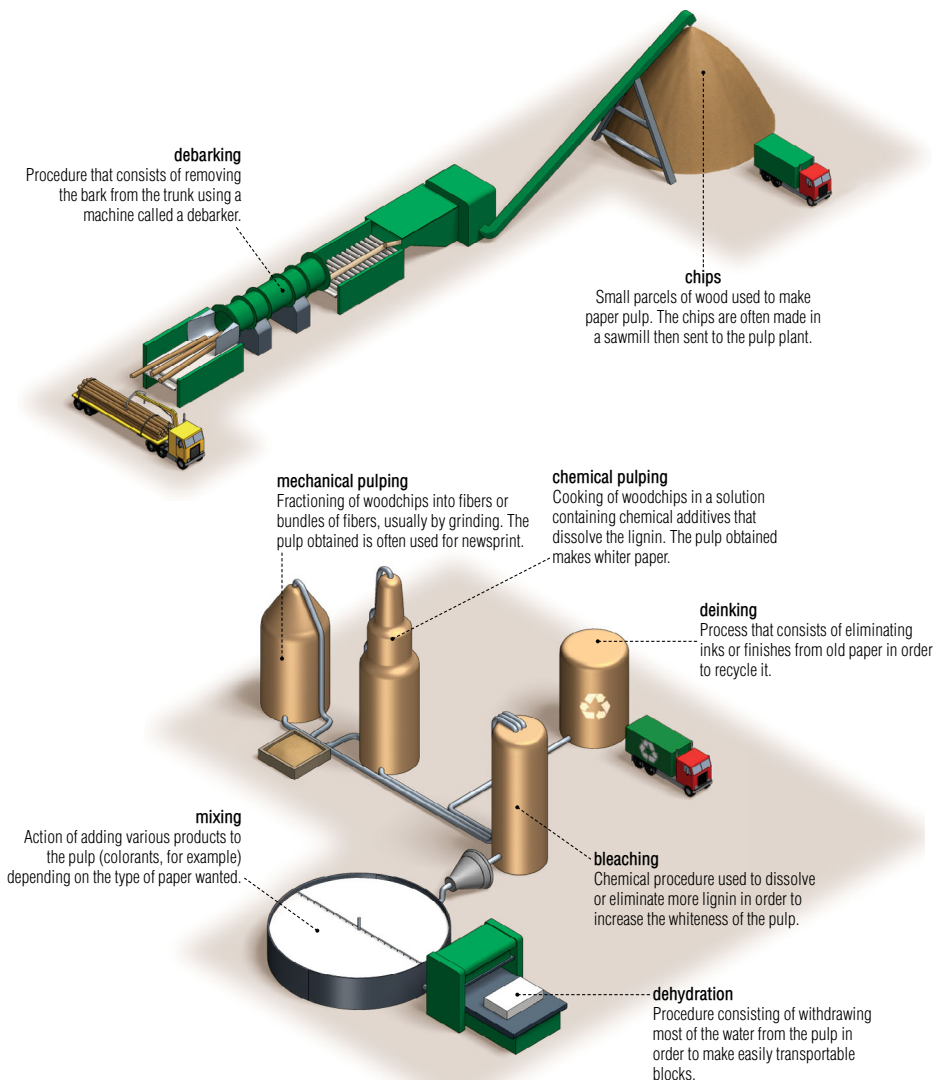
header

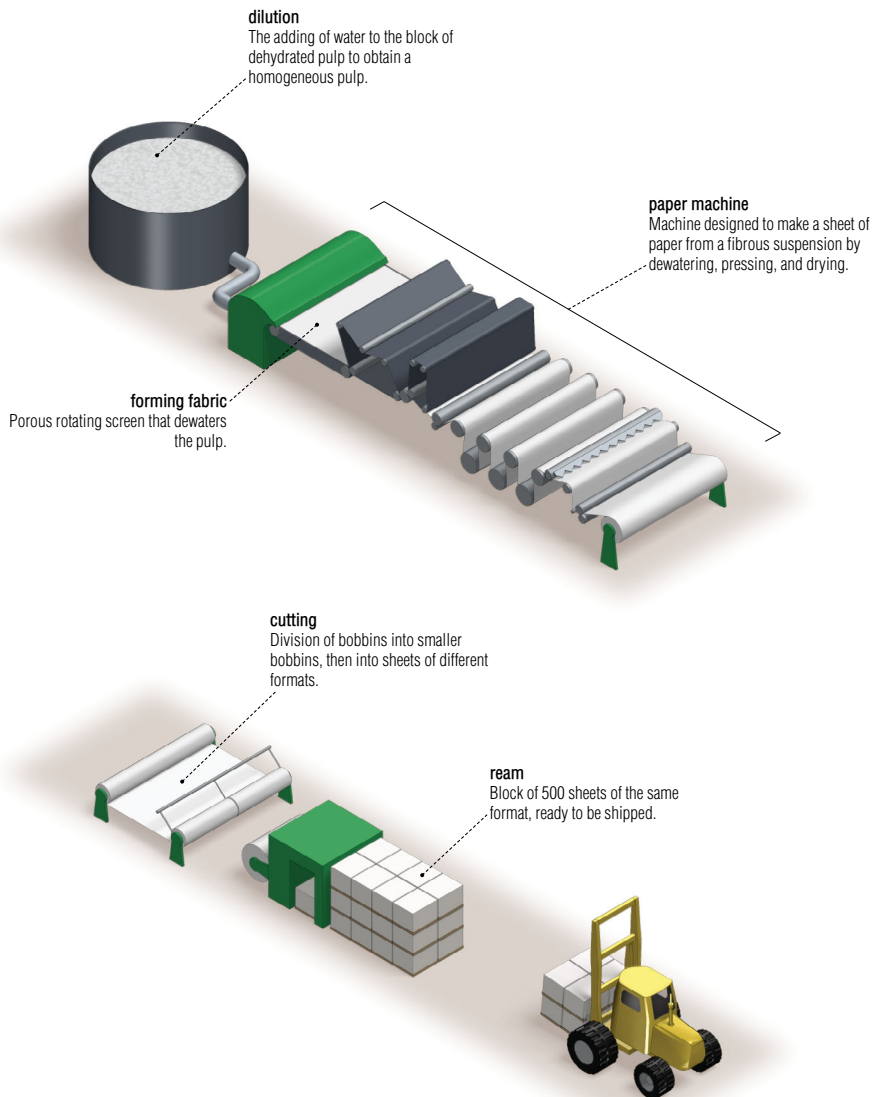
Trough usually made of sheet metal into which the cut crop is conveyed; from there it is sent through the feeding tube to the thresher.



paper

Material made from plant fibers (generally wood) reduced to pulp, then stretched and dried into sheets. Some paper is also made from recycled fibers.





rubber

Elastic, waterproof, strong fabric, made from latex extracted from a tropical tree (hevea).

**ball**

Sphere filled with air, often made of rubber, used in a number of sports (football, basketball, volleyball, etc.).

**tire**

Circular deformable unit made of rubber, mounted on the wheel and inflated with air, providing the connection between the motorcycle and the road, absorbing the unevenness of the road.

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